

DEENDAYAL PORT AUTHORITY



TENDER DOCUMENTS FOR

Construction of Oil Jetty No. 10 at Kandla

**EXECUTIVE ENGINEER (C-I)
CONSTRUCTION-I DIVISION
DEENDAYAL PORT AUTHORITY
ROOM NO. 303, 2nd FLOOR,
NEW ANNEX BUILDING
KACHCHH- 370201
MOBILE – 96381 44900
E-MAIL: constdiv1@gmail.com**

INDEX

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 for Civil Works
SECTION 6	:	Drawing
SECTION 7	:	Bill of Quantities
SECTION 8	:	Forms of Securities and other Formats
SECTION 9	:	GUIDELINES ON BANNING OF BUSINESS DEALINGS

DEENDAYAL PORT AUTHORITY

DC:1

COMPETITIVE BIDDING

BID NO: C-I: 01/2026

NAME OF WORK: "CONSTRUCTION OF OIL JETTY NO. 10 AT KANDLA"

PERIOD OF DOWNLOADING OF BID DOCUMENTS

FROM	:	14.01.2026
TO	:	17.02.2026 @16:00 HRS.
LAST DATE AND TIME FOR RECEIPT OF BIDS	:	17.02.2026 @16:00 HRS
TIME AND DATE OF OPENING OF BIDS	:	17.02.2026 @16:05 HRS.
PLACE OF OPENING OF BIDS	:	OFFICE OF EXECUTIVE ENGINEER (C-I) CONSTRUCTION-I DIVISION DEENDAYAL PORT AUTHORITY ROOM NO.303, 2 ND FLOOR, NEW ANNEX BUILDING, KACHCHH-370201

OFFICER INVITING BIDS :

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

DEENDAYAL PORT AUTHORITY

NOTICE INVITING TENDER

Tender No. C-I: 01/2026

ONLINE TENDERING (E - Tendering)

Name of Work: Construction of Oil Jetty No. 10 at Kandla

E/Online Tenders are invited by EXECUTIVE ENGINEER (C-I) 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.) (2%)	Date of Pre-Bid Meeting	Last Date and time of online Submission of bid documents	Date and time of online opening
Construction of Oil Jetty No. 10 at Kandla	5900/- (Including GST @ 18 %) to be paid in digital mode (UPI/RTGS/ NEFT /etc.) in Port account. Details are mentioned below: - Account no.: - 10080100022427 IFSC Code: - BARBOGANKUT Bank of Baroda, Gandhidham Branch	Rs.81,97,79,549.00/-	Rs.1,63,95,591/- in the form of Digital Mode/Insurance Surety Bond / Bank Guarantee issued in favor of "Board of Deendayal Port Authority" by any nationalized/scheduled bank except co-operative bank having its branch at Gandhidham as per format in the tender documents.	Nil	Up to 16:00 hours on 17.02.2026	17.02.2026 @16:05 Hrs.

Detailed tender notice along with complete tender documents can be downloaded from website <https://tender.nprocure.com> from **14.01.2026 to 17.02.2026 @ 16:00 Hrs.** Tender Notice is also available on www.deendayalport.gov.in. Technical Bid will be opened on **17.02.2026 @ 16:05 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 (C-I), CONSTRUCTION-I DIVISION DEENDAYAL PORT AUTHORITY ROOM NO.303, 2ND FLOOR, NEW ANNEX BUILDING, KACHCHH-370201** during working hours before the last date and time of downloading of tender documents.

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

DEENDAYAL PORT AUTHORITY
NOTICE INVITING ONLINE TENDER

Details about E/Online tender:

Department Name	:	CIVIL ENGINEERING DEPARTMENT
Circle/ Division	:	CONSTRUCTION-I DIVISION
Tender Notice No.	:	C-I: 01/2026
Name of Work	:	CONSTRUCTION OF OIL JETTY NO. 10 AT KANDLA
Estimated Contract Value (INR)	:	Rs.81,97,79,549/-
Period of Completion (in Months)	:	18 Months
Bidding Type	:	Open
Bid Call (Nos.)	:	One
Tender Currency Type	:	Single
Tender Currency Settings	:	Indian Rupee (INR)
Minimum Pre-Qualifying / Eligibility Criteria	:	1. Average annual financial turnover during the last three years ending 31st March 2025, should be at least Rs. 2,459.34 Lakhs.

Average annual Turnover based on CA certificate duly stamp, signed with UDIN/Membership number is to be submitted failing which bid will be stand non-responsive.

2. Experience of having successfully completed or **substantially 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. 3279.12 Lakhs.** (Excl. GST)

Or

Two similar completed works, each work costing not less than **Rs. 4098.90 Lakhs.** (Excl. GST)

Or

One similar completed work, costing not less than **Rs. 6558.24 Lakhs.** (Excl. GST)

"Similar Work" means Construction of Marine Structures like Berth/Jetty/Quay/Wharf, etc. and Allied structure if executed along with Berth/Jetty/Quay/Wharf, etc. including piling works.

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 considered non-responsive. The decision taken by DPA shall be final.

If the Bidder has completed works in a private organization as stipulated in the Minimum Qualification Criteria (work experience), the following documents must be enclosed with the BID for consideration:

- TDS Certificates: The Bidder must provide TDS certificates issued by the competent authority with respect to the work experience submitted.
- CA Certificate: The Bidder must submit certificate issued by Chartered Accountant (CA) stating that the amount shown in the TDS certificate has been received with respect to the work experience submitted by the Bidder. This document must be certified by the CA with stamp, signature and UDIN number, failing which the bid will stand non-responsive.

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 members 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 of 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. 3279.12 lakhs** (40% of estimated cost) (excl. GST) 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:

$$\text{Available bid capacity} = A \times M \times N - B,$$

where A = Maximum value of engineering (Civil/ Electrical/ Mechanical as relevant to work being procured) works executed in any one year during the last five years (updated at the current price level), taking into account the completed as well as works in progress.

M = Multiplier Factor (usually 1.5)

N = Number of years prescribed for completion of the work in question. B = Value (updated at the current price level) of the existing commitments 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 duly 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 Partnership firm, IP agreement needs to be signed by all the partners of partnership firm/authorized partner of the Partnership firm. Copy of partnership deed & authorization letter may be submitted. In case of Private Limited Company, IP agreement needs to be supported with copies of 'Power of Attorney and Board resolution' shall be submitted at technical bid stage. If the Bidder is a Joint Venture or a consortium, Integrity pact agreement must be signed by all joint venture members or consortium members.
- IV. 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.: - IFSC Code: - BARBOGANKUT Bank of Baroda, Gandhidham Branch
BID Security	:	Rs. 1,63,95,591/- in the form of Digital mode/ Insurance Surety Bond / Bank Guarantee issued in favor of "Board of Deendayal Port Authority" by any Nationalized/scheduled (except co- operative) bank having branch at Gandhidham as per format provided in the tender documents.
Bid Document Downloading Start Date	:	14.01.2026
Bid Document Downloading End Date	:	17.02.2026
Date & Place of Pre-Bid Meeting	:	NA
Last Date and Time for Receipt of Online Bids	:	17.02.2026 @16:00 Hrs.
Bid Validity Period	:	120 Days
Condition	:	<ol style="list-style-type: none"> 1. Tender Fees by digital mode of payment in Account no. 10080100022427, IFSC code: BARBOGANKUT, Bank of Baroda, Gandhidham branch. The proof for transfer of funds to be submitted in technical bid stage. 2. The bid shall be accompanied by Payment through Digital mode/Insurance Surety Bond/ Bank Guarantee, issued in favor of "Board of Deendayal Port Authority" by any Nationalized/scheduled (except co-operative) bank having branch at Gandhidham as per format provided in the tender documents towards Bid Security (EMD). 3. The bid/Tender not accompanied with Tender fee, EMD and integrity pact agreement in technical Bid shall not be considered responsive and price bid will not be opened. 4. The bid/tender shall also be accompanied by Integrity Pact Agreement (Annexure I). <ol style="list-style-type: none"> 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 duly 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 Partnership firm, IP agreement needs to be signed by all the partners of partnership firm/authorized partner of the Partnership firm. Copy of partnership deed & authorization letter may be submitted. In case of Private Limited Company, IP agreement needs to be supported with copies of 'Power of Attorney and Board resolution' shall be submitted at technical bid stage. If the Bidder is a Joint Venture or a consortium, Integrity pact agreement must be signed by all joint venture members or consortium members.

IV. 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. In case of Micro and Small Enterprise (MSEs) holding valid certificate issued by any agencies/organization under,

SECTION F	CONSTRUCTION
Division 42	Civil Engineering
Group 429	Construction of other Civil Engineering Projects
Class 4290	Construction of waterways, Harbour and
Sub-Class	river works, dredging of waterways
42902	

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 below only shall become eligible for exemption from payment of Tender fee & EMD. Such bidder shall upload the scanned copy of valid certificate in technical 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 EMD, Tender Fee and other documents during office hours: up to 24.02.2026 by R.P.A.D./Speed post or in person in the chamber of **EXECUTIVE ENGINEER (C-I) CONSTRUCTION-I DIVISION DEENDAYAL PORT AUTHORITY ROOM NO.303, 2ND FLOOR, NEW ANNEX BUILDING, KACHCHH-370201. Mobile – 96381 44900**

Bid Opening Date : Technical Bid will be opened on **17.02.2026 @ 16:05 Hrs. Date** of Price Bid shall be notified after scrutiny & evaluation of Technical Bid to qualified bidders.

Documents required to be submitted by scanning through online : Documents in support of fulfilling qualifying criteria as indicated above.

- a. Tender fee to be paid through digital mode of Payment through Digital Mode in Account no 10080100022427 IFSC code: BARBOGANKUT, Bank of Baroda, Gandhidham branch
- b. EMD to be paid through **Digital mode/Insurance Surety Bond/ Bank Guarantee** issued in favor of "Board of Deendayal Port Authority" by any Nationalized/scheduled (except co-operative) bank having branch at Gandhidham as per format provided in the tender documents.
- c. Average annual turnover on CA certificate duly stamp signed by UDIN number is to be submitted failing which bid will be stand non- responsive.
- 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 Partnership firm, IP agreement needs to be signed by all the partners of partnership firm/authorized partner of the Partnership firm. Copy of partnership deed & authorization letter may be submitted. In case of Private Limited Company, IP agreement needs to be supported with copies of 'Power of Attorney and Board resolution' shall be submitted at technical bid stage. If the Bidder is a Joint Venture or a

consortium, Integrity pact agreement must be signed by all joint venture members or consortium members.

IV. 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 (C-I), DEENDAYAL PORT AUTHORITY
Bid Opening Authority	:	EXECUTIVE ENGINEER (C-I), DEENDAYAL PORT AUTHORITY
Address	:	EXECUTIVE ENGINEER (C-I), CONSTRUCTION-I DIVISION, DEENDAYAL PORT AUTHORITY, ROOM NO. 303, 2 ND FLOOR, NEW ANNEX BUILDING, GANDHIDHAM, KACHCHH-370201
Contract Details:		Mobile – 96381 44900

**EXECUTIVE ENGINEER (C-I),
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

INFORMATION AND INSTRUCTIONS FOR CONTRACTORS FOR E-TENDERING FORMING PART OF NIT AND TO BE POSTED ON WEBSITE.

1. Information and instructions for Contractors will form part of NIT and to be uploaded on website.
2. The intending bidder must have class-III digital signature to submit the bid.
3. The Bid Document as uploaded can be viewed and downloaded free of cost by anyone including intending bidder. But the bid can only be submitted after uploading the mandatory scanned documents such as a Receipt of EMD in form of Digital mode/Insurance Surety Bond/Bank Guarantee, Tender Fee in form of online Digital mode of Payment.
4. Bidders may modify or withdraw their bids before last date and time of submission of bid as notified.
5. While submitting the modified bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
6. On opening date, the contractor can login and see the bid opening process. After opening of bids, he will receive the competitor bid sheets.
7. Contractor can upload documents in the form of JPG format and PDF format.
8. It is mandatory to upload scanned copies of all the documents including GST registration as stipulated in the bid document. If such document is not uploaded his bid will become invalid and cost of bid document shall not be refunded.
9. If the contractor is found ineligible after opening of bids, his bid shall become invalid and cost of bid document shall not be refunded.
10. If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically by the contractor the bid shall become invalid and cost of bid document shall not be refunded.
11. Certificate of Financial Turn Over: At the time of submission of bid, contractor may upload Affidavit/ Certificate from CA mentioning Financial Turnover of last 3 (three) years or for the period as specified in the bid document and further details if required may be asked from the contractor after opening of technical bids. There is no need to upload entire voluminous balance sheet.
12. Contractor must ensure to quote rate of each item. If any cell is left blank and no rate is quoted by the bidder, rate of such item shall be treated as "0" (ZERO).
13. The Draft information and instructions to Contractors may be modified suitably by NIT approving authority as per requirement
14. All the mandatory document required/prescribed for Pre-qualification have to be enclosed by the bidder failing which his offer shall be rejected and treated as non-responsive. However, additional documents required if any for verification of the original documents shall be submitted by the bidder if required by DPA.

List of Documents to be scanned and uploaded within the period of bid submission:

- I. EMD in form of Digital mode/Insurance Surety Bond/Bank Guarantee Drawn in favour of Board of Deendayal Port Authority, issued by any Nationalized/scheduled bank (Except Co-op bank) having branch at Gandhidham as per enclosed format.
- II. Tender Fee form of online Digital mode of Payment.
- III. Integrity Pact Agreement

Bid Document.

- I. Certificates of Work Experience of successfully completed works issued by the client.
- II. Certificate of Financial Turnover from CA
- III. Any other Document as specified in the Section I.
- IV. Affidavit as per provisions of NIT.
- V. Certificate of Registration for GST and acknowledgement of up to date filed return if required.
- VI. Bid capacity calculations along with balance financial liability of works in hand.

**Executive Engineer (C-I)
Deendayal Port Authority**

SECTION -1

INSTRUCTIONS TO BIDDERS

a. GENERAL

1.1 Scope of Bid

The Executive Engineer (C-I), Construction-I Division, Deendayal Port Authority, invites bids by E- Tendering for the work of “**Construction of Oil Jetty No.10 at Kandla**” 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 in accordance with clause 1.36.

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. Solvency certificate from Bankers for -----(value). **(Refer Clause 'A' of Sec-5)**
 - d. Equipment requirement/schedule. **(Refer Clause 'A' of Sec-5)**
 - e. Managerial/Manpower requirement. **(Refer Clause 'A' of Sec-5)**

- 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 'A' of Sec-5)**

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 proposed to carry out to the contract.
- 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 'A' of Sec-5)**
- 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 Goods & 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 2025 should be at least **Rs.2459.34 Lakhs.**

Average annual Turnover based on CA certificate duly stamp, signed with UDIN/Membership number is to be submitted failing which bid will be stand non-responsive.

- ii. Experience of having successfully completed or substantially 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. 3279.12 Lakhs.** (Excl. GST)
 - or**
 - b. Two similar completed works each work costing not less than **Rs. 4098.9 Lakhs.** (Excl. GST)
 - or**
 - c. One similar completed work costing not less than **Rs. 6558.24 Lakhs.** (Excl. GST)

“Similar Work” means Construction of Marine Structures like Berth/Jetty/Quay/Wharf, etc. allied structure if executed along with Berth/Jetty/Quay/Wharf, etc. including piling works.

If the Bidder has completed works in a private organization as stipulated in the Minimum Qualification Criteria (work experience), the following documents must be enclosed with the BID for consideration:

- TDS Certificates: The Bidder must provide TDS certificates issued by the competent authority with respect to the work experience submitted.
- CA Certificate: The Bidder must submit certificate issued by Chartered Accountant (CA) stating that the amount shown in the TDS certificate has been received with respect to the work experience submitted by the Bidder. This document must be certified by the CA with stamp, signature and UDIN number, failing which the bid will stand non-responsive.

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 ‘A’ of Sec-5)**

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 considered non-responsive. The decision taken by DPA shall be final.

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:

Available bid capacity = A x M x N - B,

where A = Maximum value of engineering works executed in any one year during the last five years (updated at the current price level), taking into account the completed as well as works in progress

M = Multiplier Factor (usually 1.5)

N = Number of years prescribed for completion of the work in question.

B = Value (updated at the current price level) of the existing commitments 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 Officer or his nominee – in – charge.

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	2024-25	2023-24	2022-23	2021-22	2020-21
Index	154.9	151.4	152.5	139.40	123.40
Multiplying factor	1.00	1.02	1.02	1.11	1.26

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. 10 crores. However, there shall be a maximum of 3 nos. 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 addendum 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 for Civil Works
- SECTION 6 : Drawing
- SECTION 7 : Bill of Quantities
- SECTION 8 : Forms of Securities and other Formats
- SECTION 9 : GUIDELINES ON BANNING OF BUSINESS DEALINGS

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.

1.8.2.1 Bidding documents shall be downloaded. The documents should be complied 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 (Refer Clause 'A' of Sec-5)

1.9.2.1 The bidder or his official representative is invited to attend a pre-bid meeting, which will take place on **2026 @ 16:00 Hrs.** at Old Board Room, A.O. Building, Deendayal Port Authority, Gandhidham - Kutch, 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 1.20.2 below.

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) Tender fee, EMD, Integrity Pact Agreement and Bid Security Declaration (In case of MSME Certificated submitted)
- 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, (except GST) 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 2 % of the Estimate cost put to tender.
- 1.16.2** The EMD up to Rs. 5 Lakhs shall be payable via digital mode of payment. The proof for transfer of funds to be submitted in technical bid stage. EMD beyond Rs.5 lakhs be payable in form of **Digital mode/ Insurance Surety Bond / Bank Guarantee** for the entire amount from any Nationalized/Scheduled Bank (except Co-operative Banks) having its branch at Gandhidham. 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 stands disqualified.
- 1.16.3** EMD of unsuccessful bidders other than L1 and L2 be refunded immediately after ranking of price bids. Earnest money of L2 be refunded immediately after entering in to agreement with L1 and acceptance of performance Guarantee from L1.
- 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
- The bidder withdraws the bid after bid opening during the period of bid validity.
 - The bidder does not accept the correction of the Bid price, pursuant to any arithmetic errors or
 - The successful bidder fails within the specified time limit to
 - Sign the Agreement or
 - Furnish the required Performances security.
 - 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 technical 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: -

SECTION F	CONSTRUCTION
Division 42	Civil Engineering
Group 429	Construction of Other Civil Engineering Projects
Class 4290	Construction of waterways, Harbour and river works,
Sub-Class 42902	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 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".

(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

(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 "**Construction of Oil Jetty No.10 at Kandla**"

Bid reference no C-I: 01/2026

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 C-I :01/2026) in the office of The Executive Engineer (C-I) 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.

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.

- 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 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 Claus 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.
- 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

Clause 1.16.

- 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.

- 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.

- 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.

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 in 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 to the correction of arithmetic errors discovered by the Employer in the evaluation of the Bids in accordance with Clause 1.27.

Subject to the above paragraph, 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.

1.27 Correction of Errors.

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-Clause 1.16. 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 Clause 1.26.

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.

1.30 Nil

F. AWARD OF CONTRACT

1.31 Award Criteria

1.31.1 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.

1.32 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.

1.33 Notification of Award and Signing of Agreement

- 1.33.1** 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").
- 1.33.2** 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 1.34.
- 1.33.3** 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.
- 1.33.4** 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.

1.34 Performance Security - Not Applicable (Refer Clause 5.148 of Sec-5)

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/ Performance guarantee shall be 10% of Contract price of which 5% of contract price should be submitted as FDR or Insurance Surety Bond / Bank Guarantee of Nationalized/scheduled bank (except Co-operative) Banks having its branch at Gandhidham, and BG should remain valid for 60 (Sixty) days beyond the date of completion of all contractual obligation of the concern contract including Defect liability period or Digital transfer within (21 days in case of domestics bid and within 28 days in case of global bids) 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 5.24), NOC from Geology and Mining Department, Bhuj/Anjar & Payment of welfare cess for final bill.

Failure of the successful bidder to comply with the requirements of above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Bid security.

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 on final bill shall be submitted before releasing the Performance Guarantee.

1.35 Advance Payment

- 1.35.1** 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.

1.36 Conciliator

1.36.1 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.

1.37 Corrupt or Fraudulent Practices - Not Applicable (Refer Clause 5.149 of Sec-5)

1.37.1 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.

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

Contractor

**Executive Engineer (C-I)
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:" Construction of Oil Jetty No.10 at Kandla"

To

The Executive Engineer (C-I),
Construction-I Division,
Deendayal Port Authority,
Room No.303, 2nd Floor,
New Annexe Building,
Gandhidham Kachchh-370201.

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 'A' of Sec-5)**
- 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 'A' of Sec-5)**
- 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 1.34] 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 'A' of Sec-5)**
- h) We have no conflict of interest in accordance with **[ITB Sub-clause no.1.3.2]**
- 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: - **"Construction of Oil Jetty No.10 at Kandla"**

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
2022-23	
2023-24	
2024-25	
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 copies.

3. Similar works

Particulars	Year	No. of works	Value
Total value completed similar work as defined in the tender document during last 7 years	2018-19		
	2019-20		
	2020-21		
	2021-22		
	2022-23		
	2023-24		
	2024-25		

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 following contractor's equipment is essential for carrying out the works. 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 proposed for administration and execution of the contract. Attach biographical data. Refer also to sub. Clause 1.4.2(e) of instructions to bidders and sub. Clause 1.9.1 of the condition of contract.

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 'A' of Sec-5)

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. **C-I: 01/2026**

Sub: **"Construction of Oil Jetty No.10 at Kandla"**

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 here by 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 "**Construction of Oil Jetty No.10 at Kandla**"

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.500/- non-judicial Stamp)

[The successful Tenderer 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]*.

This agreement made this _____ day of _____

BETWEEN

- (1) *The Board of Port of Deendayal Port Authority, an Autonomous Body of the Ministry of Ports, Shipping & Waterways of the Government of INDIA, incorporated under the Major Port Authority Act, 2021 as Amended / replaced thereafter, under the Laws of India and having its principal place of business at [insert address of Port] (hereinafter called "the Port"), and (here in after called "Board"/ Port"),*
- (2) *[insert name of Contractor], [incorporated under the laws] [insert: country of Contractor] and having its principal place of business at [insert: address of Contractor] (hereinafter called "the Contractor").*

WHEREAS the Employer/ Board invited Tenders against tender no. **[(C-I:01/2026).]** for execution of **[TENDER TITLE AND BRIEF DESCRIPTION]** viz., 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)]* (hereinafter called "the Contract Price").

AND WHEREAS the contractor has agreed to deposit the Performance Security Deposit as follows for due fulfillment of all the conditions of the contract:

1. 5% of Rs. _____ paid in the form of Bank Guarantee/Insurance Surety Bond/FDR or digital mode of payment, vide no. _____, dated _____ issued by _____ (to be submitted in 21 days of issue of LOA)
2. Balance 5% amount of Rs. _____ to be recovered from running bills.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred 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 is any issued **[numbers and dates];**
 - (g) The Contractor's Bid and original Price and Delivery Schedules;
 - (h) The Employer/ Board's Notification of Award;
 - (i) **[Correspondence the Employer/ Board had exchanged with the bidder till and after award of contract [specific letters and dates]; and**
 - (j) **[Add here any other document(s)]**

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 witnesses and it is hereby agreed and declared as follows:

All the disputes related to submit contract shall be resolved through a conciliation committee / council comprising Independent Subject Tender Expert".

3. In consideration of the payment to be made to CONTRACTOR for WORK to be executed by him. CONTRACTOR hereby Covenants with EMPLOYER/ BOARD that 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 at 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 time and at such manner as provided for in the CONTRACT.
5. In consideration of the due provision, execution and completion of WORK, CONTRACTOR does 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 whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[insert the name of the Contract governing law country]* on the day, month and year indicated above.

*For and behalf of the **Contractor***

WITNESS: (Name, Signature, address)

1. _____

2. _____

*Signes, Sealed and delivered by
Chief Engineer on behalf of the board
in Presence of:*

For and behalf of the

*employer/board WITNESS: (Name,
Signature, address)*

1. _____

2. _____

The common seal of the Board of Deendayal Port Authority Affixed in the presence of:

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 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 Executive Engineer (C-I) 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.10 crores. However, there shall be a maximum of 3 number of partners.

3.8 Subcontracting (Refer Clause 'A' of Sec-5)

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.

3.8.2 Other Contractor (Refer Clause 'A' of Sec-5)

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 (Refer Clause 'A' of Sec-5)

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) Insofar 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

3.21.1 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 and this will be a Compensation Event. **(Refer Clause 'A' of Sec-5)**

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 laws where the Site is located.

3.24 Disputes

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 'A' of Sec-5)**

3.25 Settlement of Disputes (Refer Clause 'A' of Sec-5)

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

- (i) The Conciliator shall give a decision in writing within 28 days of 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 conciliator's decision will be final and binding.

3.25.3 Arbitration

Any dispute in respect of contracts where party is dissatisfied by the Conciliator's 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 equally 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 'A' of Sec-5)

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 **12 months** 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. If there is no Defect the test shall be a Compensation Event.

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. **(Refer Clause 'A' of Sec-5)**

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: **(Refer Clause 'A' of Sec-5)**

- 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 15% 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 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.

3.43.2 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 'A' of Sec-5)**

3.43.3 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 'A' of Sec-5)**

3.43.4 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 'A' of Sec-5)**

3.43.5 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 'A' of Sec-5)**

3.43.6 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 'A' of Sec-5)**

3.43.7 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 'A' of Sec-5)**

3.43.8 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 'A' of Sec-5)

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 from 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.

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.

3.45 Tax (Refer Clause 'A' of Sec-5)

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 (Refer Clause 'A' of Sec-5)

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.

Po = 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.

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 Statute, 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

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 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 owner 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 (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 owner, 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 within 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 owner, 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 (Excl. GST) for LD shall be inclusive of tender price plus taxes and duties.

3.50 Incentives or Bonus (Refer Clause 'A' of Sec-5)

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 'A' of Sec-5)

- (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 Security - Not Applicable (Refer Clause 5.148 of Sec-5)

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/ Performance guarantee shall be 10% of Contract price of which 5% of contract price should be submitted as FDR or Insurance Surety Bond / Bank Guarantee of Nationalized/scheduled bank (except Co-operative) Banks having its branch at Gandhidham, and BG should remain valid for 60 (Sixty) days beyond the date of completion of all contractual obligation of the concern contract including Defect liability period or Digital transfer within (21 days in case of domestics bid and within 28 days in case of global bids) 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 5.24), NOC from Geology and Mining Department, Bhuj/Anjar & Payment of welfare cess for final bill.

Failure of the successful bidder to comply with the requirements of above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Bid security.

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 on final bill shall be submitted before releasing the Performance Guarantee.

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 number 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 Amiya Kumar Mohapatra, IFoS (Retd.) and Dr. Gopal Dhawan, Ex-CMD, MECL, has been appointed IEM by DPA from 2024. 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 Amiya Kumar Mohapatra, IFoS (Retd.) and Dr. Gopal Dhawan, Ex-CMD, MECL has been nominated as Independent External Monitor for Integrity Pact whose address is as under;

1. Shri Amiya Kumar Mohapatra, IFoS (Retd.)

Qrs. No. 5/9, Unit-9, Bhoi Nagar,

Bhubaneswar-751 022

Mobile no. 9437002530

Email: amiyaifs@gmail.com

2. Dr. Gopal Dhawan, Ex-CMD, MECL, House no.

120, Jal Shakti Vihar (NHPC Society) P4, Builders area, Greater Noida Gautam Budh Nagar, **Uttar**

Pradesh - 201 315

Mobile no. – 8007771467

Email: gdhawangeologist@gmail.com

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

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:

- (i) 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.

Contractor

**Executive Engineer (C-I)
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)	N.A.
The schedule of key personnel	(3.9)	N.A.

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 Engineer Deendayal Port Authority.

The nodal officer or his nominee is
EXECUTIVE ENGINEER (C-I),
DEENDAYAL PORT AUTHORITY,
ROOM NO:303, 2ND FLOOR,
NEW ANNEX BUILDING,
Gandhidham-370201,
KUTCH 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 **"Construction of Oil Jetty No.10 at Kandla"**

The works consist of **"Construction of Oil Jetty No.10 at Kandla"**

The start date shall be _____

The intended completion date for the whole of the work is **18 (Eighteen) 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 (3.35). 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) N.A.

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. 47 of section – 3, N.A.
subjected to Special condition provision.

SECTION 5

SPECIFICATIONS AND SPECIAL CONDITIONS

FOR CIVIL WORKS

A. SPECIAL CONDITIONS

5.0 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 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 1.8.2 (Bidding documents), 1.9.2 (Pre-bid meeting)
- (d) Clause 1.19.1(A), 1.19.2, 1.19.3, 1.20.1 (sealing and marking of bids)
- (e) Clause 1.22.2 (Modification of withdrawal of Bid)
- (f) Clause 1.23.2, 1.23.3, 1.23.4
- (g) Clause 1.26.4
- (h) Clause 1.27.1, 1.27.2 (Correction of errors)
- (i) Clause 1.34 (performance security), 1.35 (Advance payment)
- (j) Clause 1.36.1 (Conciliator), 1.37 (Corrupt or fraudulent practices)

5.02 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 (Section-2)
- (c) Table at Sr.No.7 of Information required by the employer prequalification of bidder (Section-2)

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

- (a) Clause 3.8 (Sub-contracting), 3.9 (Personnel)
- (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), 3.40.1, 3.40.3
- (f) Clause 3.43.2, 3.43.3, 3.43.4, 3.43.5, 3.43.6, 3.43.7

- (g) Clause 3.44.1, 3.44.2, 3.44.3 (Compensation events)
- (h) Clause 3.45 (Tax), 3.47 (price Variation)
- (i) Clause 3.50 (Incentive or Bonus)
- (j) Clause 3.51 (Advance Payment), 3.52 (performance Security)
- (k) The schedule of key personnel (3.9)

5.04 The following clauses (Section-4 to 8) will not be applicable, which is superseded.

- (a) Conciliator is not applicable under contract date of (section-4)
- (b) The form for Dispute Review Board Agreement (section-8) & Exception & Deviations (Section-8).
- (c) The form for specimen Bank Guarantee for advance payment (Section -8).
- (d) The form for specimen Bank Guarantee for stage payment (Section -8).

5.05 The following Existing clauses are Modified as under;

5.05.1. Section-I; Clause No. 1.4.2 d; Major items of construction equipment available with the bidder

5.05.2. Section 2 Table 5 The list of Equipment available with bidder

5.05.3. Section 2 Table 6 Qualification and experience of key personnel available with the bidder. Attach biographical data.

5.05.4. Section-I; Clause No. 1.5.2; Section: Clause 3.7

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 -8 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 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, as per the proforma of power- of- attorney for lead member of JV/ consortium at **Section -8**, 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.

5.06 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) 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.

- iv) 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.
- v) If the tenderer have successfully **Substantially completed** /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.
- vi) 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 **"Similar Work"** means Construction of Marine Structures like Berth/Jetty/Quay/Wharf, etc. Allied structure if executed along with Berth/Jetty/Quay/Wharf, etc. including piling works meets the requirement of MQC, such experience shall also be considered for evaluation.
- vii) If the similar work is executed as sub-contractor, it is mandatory to upload the sub-contract permission letter obtained from the Govt./Public Sector officer in case work belongs to the Govt./Public Sector, or from the owner of the project in case work belongs to private organization. Also the completion certificate/form 3A authenticated by concern Govt./Public Sector officer or owner of the project shall be uploaded along with TDS certificate deducted from that particular work issued by the competent authority shall be submitted along with bid submission.

5.07 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.

5.08 GOODS & SERVICE (GST) CLAUSE

The quoted rate of the tenderer shall be inclusive of all taxes and duties excluding applicable GST. The Contractor may raise GST invoice as monthly running bills notwithstanding the payment from DPA. The Contractor has to comply the GST remittance and filing as per statutory requirements. GST will be reimbursed separately on confirmation of credit in DPA GST Portal. DPA shall deduct TDS from the claim bill as per the statutory provisions of prevailing laws.

- (i) The contractor shall quote the price exclusive of GST. The contractor shall quote prevailing GST rate separately, which shall be reimbursed by DPA after ascertaining necessary compliance as per Goods & Service Tax Act, 2017.
- (ii) All other duties, taxes, cess, applicable if any, shall be borne by the contractor.
- (iii) TDS under GST Act is required to be deducted @2% (1% CGST and 1% SGST or 2% IGST) or as admissible from payment /credit given to the contractor.
- (iv) The element of GST will not be considered for evaluation of financial purpose.
- (v) Contractor/service provider/supplier etc. has to ensure timely & proper filling of GSTR 1 so that Deendayal Port Authority can avail input tax credit in timely manner. In case DPA not allowed input credit due to failure of part of the contractor/service provider/supplier etc., it will be a financial loss to DPA & therefore same shall be recovered from the payment/deposit of the contractor/service provider/supplier.

Also change if any in the Government Policy or Amendment in Tax structure the same will be applicable from time to time.

5.08.1 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/-

5.09 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.

5.10 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.

5.11 Contractor has to make his own arrangement for electric supply. The charges for electric supply consumption will be borne by contractor as per prevailing rates. The contractor has also to install his own generator etc. (if required) at his own cost and risk to meet with his full requirement of electric power.

5.12 Drawings and Its Approval

- 5.12.1 The drawings enclosed with the tender documents is to provide for preliminary idea of the job for tender purpose only, which is not 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 “**Good for Construction (GFC)**” drawings provided by DPA / DPA appointed Consultant/ Third Party Agency appointed by contractor, 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.
- 5.12.2 The design/ drawings provided by DPA / DPA appointed Consultant/Third Party Agency appointed by contractor should be got vetted/ proof checked from the Marine Specialized IIT's only, as per the approval of Engineer In-charge. The Cost of proof checking shall be borne by the Contractor.
- 5.12.3 For the departmental design all drawings which are reasonably required for execution of the work except erection drawings, shop drawings and drawings for temporary works will be supplied by the Engineer from time to time during execution of work and no dispute of this account shall be entertained.
- 5.12.4 Any further detailed working drawings which the contractor may prepare for a particular part of the work shall be submitted in duplicate for approval of the Nodal Officer or his nominee before the particular part of the work is taken in hand.
- 5.12.5 The contractor shall at the time of submitting such drawings call to the attention of the Nodal Officer to any alternative detail or modification of the contract drawings which the contractor may wish to make at least 7 days prior to the commencement of the work or part of the work to which such drawings relate.

- 5.12.6 The Nodal Officer will record on the copies as amended his approval, if he requires any of the alterations submitted by the Contractor and will return one copy to the Contractor who shall carry out the work in accordance therewith. The Contractor shall forward to the Nodal Officer three additional copies of the working drawings as approved.
- 5.12.7 In addition to the aforesaid working drawings, working drawings are also to be submitted. (The same procedure being followed as described above) in respect of any, work proposed. The approval of the Nodal Officer of all or any of the drawings shall not relieve the Contractor of any liability of obligation under the contract in respect of the execution of the work.
- 5.12.8 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.

5.13 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.

- A. The furnishing to the Nodal Officer of any design for any of the temporary works and staging shall not relieve the contractor of any liability or obligation under the contract in respect of such temporary works and staging. "Approved" means, approved by the Nodal Officer in writing including subsequent confirmation of previous verbal approval.
 - B. 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.
 - C. The contractor has to make his own arrangement for the storage of materials at site or work.
 - D. The Contractor shall at his own costs and expenses supply five complete sets of "As Made" drawings on polyester tracing film, set of 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.
- 5.14 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.
- 5.15 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.

5.16 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 Technical Advisor and the charges there of shall be borne by the Contractor.

5.17 The contractor shall have to obtain necessary licence from the Assistant Labour Commissioner (Central) Gandhidham/Adipur/Gopalpuri in case he has to engage 10 or more workers on any day during the execution of work.

5.18 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.

5.19 As the work progresses, inspection of cement, aggregate, reinforcing steel, structural steel etc. and testing of the material 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 always made accessible to the Nodal officer or his nominee 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.

5.20 The items mentioned in the BOQ shall be executed in the Kandla / Old Kandla area at any location required as per the directions of the EIC during the entire contract period.

5.21 "Force Majeure (FM)"

Conditions beyond control of either parties like war, hostility, acts of public enemy, civil commotion, sabotage, serious loss or damage by fire, explosions, epidemics, strikes, lockouts or acts of God come under the legal concept of Force Majeure, delays in performance of contractual obligations under influence of FM conditions are condonable by the other party without any right to termination or damages, provided, notice of the happening of any such event is given by the affected party to the other within 30 (thirty) days from the date of occurrence. Works under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist. However, if such event continue for a period exceeding 120 days, either party may at its option terminate the contract by giving notice to the other party."

5.22 All the royalties of the materials, quarry fees, octroi, charges, sales tax 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.

- 5.23** All royalties of materials, quarry fees, etc., payable by the contractor directly to the authority concern and rates tendered shall be deemed to be inclusive of all charges. Before claiming security deposit, contractor shall produce “No dues certificate” from the Geologist, Geology and mining department of Gandhidham/Anjar.
- 5.24** 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.
- 5.25** 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.
- 5.26** 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.
- 5.27** 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.
- 5.28** 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.
- 5.29** 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.
- 5.30** 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.
- 5.31** 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, 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.
- 5.32** All the precautions regarding the safety of the work shall have to be taken and the instruction of Engineer-in-charge in this respect shall have to be followed strictly.

- 5.33** 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.
- 5.34** Contractor shall provide 2 nos. of four-wheeler tourist vehicle (Bolero / similar make) with driver during contract period for the one car for use of DPA employer/representative and other car for use for the around the clock of work. 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. Necessary fuel/ oil/ driver / maintenance etc., will have to be borne by the contractor. During the currency 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.3000/- per day for a one vehicle will be recovered.

5.35 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".

5.36 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.

5.37 Some indication of nature and extent of the works have been given on the drawings and those are preliminary only. 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.

5.38 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.

5.39 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.

5.40 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.

5.41 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.

- 5.42** It will be necessary of the contractor to provide insurance cover to his workers and his staff.

5.43 Sub-Soil Data

In the area covered by the Deendayal Port, if the nature of sub-soil is indicated in relevant tender drawing for guidance only. The tenderer shall satisfy him of the character and volume of work under the items and expected surface and/or sub- soil water to be encountered. Contractor must satisfy himself about the general conditions of the site and ascertain the existing and future obstruction likely to come up during the execution of the contract to carry out the work.

5.44 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.

5.45 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.

5.46 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, 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.

3. HUTMENT AREA FOR LABOURS

Area for temporary hutments, canteens, crèche, etc. for labour shall be allotted free of cost. However, if any leveling/dressing as well as filling required in the said area, contractor has to carried-out the same at his own cost. The necessary barricading, lights, sign boards and flags etc., wherever necessary has to be provided by the contractor.

5.47 WATCHING & LIGHTING

The contractor shall in connection with the works, provide and maintain at his own expenses, all lights, guards, fencing and watching 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.

5.48 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.

5.49 PROGRESS PHOTOGRAPHS

The contractor at his own cost shall supply to the Nodal Officer or his nominee two copies of color photographs of works in progress as directed by the Nodal Officer or his nominee from time to time. The negatives of the photographs 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.

5.50 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.

5.51 INFLAMMABLE STORES

The contractor is to comply with all local regulation in respect of 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.

5.52 FIRE HAZARDS

The contractor shall be required to comply with the petroleum act 1934 and petroleum rules 1976 during progress of the construction work. If Fire watch services as required, shall be given free of cost but arrangement from Marine / Concerned Department shall have to be made by the Contractor.

5.53 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.

5.54 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.

5.55 The prospective bidders may raise query 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.

5.56 The bidder has to execute Integrity pact arrangements with Deendayal Port Authority, Kandla (as per agreement form enclosed) Shri Amiya Kumar Mohapatra, IFoS (Retd.) and Dr. Gopal Dhawan, Ex-CMD, MECL, has been appointed as Independent External Monitor for Integrity, whose address is as under:

1. Shri Amiya Kumar Mohapatra, IFoS (Retd.)

Qrs. No. 5/9, Unit-9, Bhoi Nagar,
Bhubaneswar-751 022
Mobile no. 9437002530
Email: amiyaifs@gmail.com

2. Dr. Gopal Dhawan, Ex-CMD, MECL,

House no. 120, Jal Shakti Vihar (NHPC Society)
P4, Builders area, Greater Noida Gautam Budh
Nagar, **Uttar Pradesh - 201 315**
Mobile no. – 8007771467
Email: gdhawangeologist@gmail.com

- 5.57** 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 duly 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 Partnership firm, IP agreement needs to be signed by all the partners of partnership firm/authorized partner of the partnership firm. Copy of partnership deed and in case of Private Limited Company, IP agreement needs to be supported with copies of 'Power of Attorney and Board resolution' shall be submitted at technical bid stage. If the Bidder is a Joint Venture or a consortium, Integrity pact agreement must be signed by all joint venture members or consortium members.

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.

5.58 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.

5.59 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 & procedure for rates/payments for such deviations shall be made as per clause no.3.40 (Section-3).

- 5.60** 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.

5.61 Salvage of Lost/Fallen/Construction materials

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.

5.62 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 Deputy Conservator/Harbour master, DPA at his own cost.

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.

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.

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.

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.

5.63 Site Information

(a) Contractor's Responsibilities

The information given hereunder 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.

(b) Site

Deendayal port is situated on the West Coast of India, in the Gulf of Kutch and along the West Bank of Kandla Creek at 70° 13" E longitude and 23° 01" N Latitude. The location and extent of the Site is shown on the Drawing. The work site falls within the notified limits of the Deendayal Port.

(c) Datum

The datum to which all levels shall be referred for the purpose of the works is the jetty Top deck level. Top deck level of jetty/wharf is +9.14m RL.

(d) Tidal Information

The following are the particulars of tidal levels related to the chart datum at Kandla

Tidal Station.

Highest High water (HHW)	:	(+) 9.50m
Mean High water Springs (MHWS)	:	(+) 6.60m
Mean High Water Neaps (MHWN)	:	(+) 5.70m
Mean Sea Level (MSL)	:	(+) 3.88m
Mean Low Water Neaps (MLWN)	:	(+) 1.81m
Mean Low Water Springs (MLWS)	:	(+) 0.78m
Lowest Low Water (LLW)	:	(-) 0.90m

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.

5.64 Permission for Port Entry

- 1) As the work has to be carried out in Custom bound area, Contractor has to fulfil all the formalities of Customs, CISF wherever required. Contractor has to coordinate with other department officials of

DPA, Customs, CISF and other related departments to avoid disturbance of day to day operation of the Port and smooth execution of the proposed work.
- 2) 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 work men 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) The items mentioned in the BOQ shall be executed in the Port area at any location required as per the directions of the EIC during the entire contract period.
- 4) 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 port is basically an operational area dealing mainly with loading and unloading of import/export various category of liquid cargo like petroleum, Edible, Chemical, LPG etc. Handling of highly toxic, Hazardous & inflammable liquid in the vicinity of work site. 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.

- 5) The service of fire watch for carrying out any hot works/cutting work etc., as required

by the Port Authority, shall be made free of cost by the department. 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.

- 6) The contractor shall have to arrange the entry permit for his and his staff, labour etc. from CISF, Deendayal Port Authority if the work is to be carried out inside oil jetty area, at his own cost as per the rules and regulation in force at that time.
- 7) Necessary Indian Dock Safety regulations for the safety purpose shall be adhered to by the contractor and he will be held responsible for any violations of the same. The set of such conditions (regulations) is available with DPA and the contractor is required to go through it before tendering.
- 8) The work has to carried out in tidal condition. The contractor shall acquaint himself with local tidal variations and quote his rates accordingly.

5.65 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, structural steel & 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 shall provide the barrier to prevent the construction material from mixing up with surface / ground water.
9. The contractor (s) should discharge Waste water generated during Construction work as per CPCB/GPCB regulations.

5.66 Get Special Conditions for Tender Documents: The all required documents for 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.

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

5.68 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.

- 5.69 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.
- 5.70 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.
- 5.71 Contractor shall provide office with all furniture, new Two computers/laptop with printer and stationery with two office assistance personal minimum graduate knowing computer in the help of DPA official for the construction period of contract.
- 5.72 Bids shall remain valid for a **period of 120 days** from the date of opening of technical bid of tender. A bid valid for a shorter period shall be rejected by the Employer as non-responsive. In exceptional circumstances, prior the expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' response shall be made in writing or by e-mail. 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.

5.73 **CONSULTANT FOR QUALITY MONITORING AND DETAILED DESIGNING, DRAWINGS, FOR CONSTRUCTION OF OIL JETTY AND ALLIED STRUCTURES WITH BACKUP DEVELOPMENT**

- i. The contractor shall engage at his own cost for Consultant for the work having requisite experience from IPA empaneled in GROUP – 1(A) MARINE CONSTRUCTION WORKS CLASS A (CATEGORY A) for the said Work. And 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:

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

- a) Consultant shall visit site and conduct detailed survey of site for preparation of design for Jetty and allied structures along with development of backup area with utility buildings. The consultant shall carry out the Geo-technical investigation and associated data for design purpose and prepare report for carried out in said area accordingly jetty and allied structures design and drawings shall be prepared. The cost is included in the quoted rate. All the expenses towards site investigation and designing and drawings, all arrangements are borne by the Contractor at his own cost.
- b) The Estimate DTP's and tender drawing have already been prepared by DPA. Consultant has to prepare the detailed design and drawings in accordance with Tender invited. And shall also prepare design drawings, during the progress of work also.
- a) The consultant shall obtain necessary proof check for the detailed design and drawings for the work through IIT (Indian Institute of Technology) before issue Good for construction Drawing at his own cost.
- b) 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.

- c) To deploy required experienced Technical Personnel having minimum experience of 02 years in marine work along with educational qualification of Bachelor of Civil engineering 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.
 - d) 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.
 - e) Reporting, Documentation, Quality certification etc.
- ii. 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.
 - iii. 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.

- 5.74** The contractor has to carry out the plantation at least 500 saplings with proper tree guard (Metal Tree Guard, with Anti-corrosive paint) and maintain them till the completion of maintenance/ defect liability period including providing arrangements for trimming the plantations, watering, temporary guarding etc. and number of tress shall be same till defect liability period. The cost of the same has to be borne by the contractor. In the event of failure of carrying out such work the department has to done the same at the risk and cost of the contractor.

B. SPECIFICATIONS

5.75 Scope of work:

The work to be performed under the scope of this specification shall broadly include:

- I. Construction of Central platform
- II. Construction of Mooring Dolphins,
- III. Construction of Approach Trestle, Platform for Pumphouse, Platform for Substation and Platform for Security cabin
- IV. Construction of access walkways
- V. Providing & fixing fenders, ladders, bollards etc.,
- VI. Construction of Steel pipe rack
- VII. Construction of buildings such as pumphouse, substation, security cabin, etc.,
- VIII. Construction of fencing
- IX. Construction of water supply, sewage treatment plant, etc.,

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.

5.76 Reference Codes, Standards & Specifications

The latest edition of the following Codes, Standards & Specifications shall be applicable.

Codes & Standards

IS 383	Coarse and Fine Aggregate for Concrete - Specification
IS 456	Plain and Reinforced Concrete - Code of Practice
IS 1786	High strength deformed steel bars and wires for concrete reinforcement
IS 13311: Part 2	Method of Non-destructive Testing of Concrete-methods of Test :Part 2 Rebound Hammer
IS 14687	Guidelines for false work for concrete structures
SP 23	Handbook on Concrete Mixes
IS 2502	Code of Practice for Bending and Fixing of Bars for Concrete Reinforcement
IS 2751	Code of Practice for Welding of Mild Steel Plain and Deformed Bars for Reinforced Concrete Construction

5.77 Basic Material Requirements

- a) Concrete, mainly comprising a mixture of hydraulic Portland cement and graded aggregates (coarse & fine), is formed by chemical reaction (called hydration) when mixed with appropriate amount of water to achieve its strength and other properties. Some other additives and admixtures as required are also added to improve its performance and special characteristics.
- b) Proper selection of basic materials like cements, aggregates, water, reinforcements, admixtures are essential as per their inherent compositions and chemical properties to produce high performing, durable concrete, which shall be best suited to the construction / design conditions and the environmental applications and shall comply with the requirements specified in this specification.
- c) Sulphate resisting Portland cement shall be used only for specific requirements depending on environmental and process exposure conditions to which the structures may be subjected to like high sulphate concentrations, processes involving Sulphur handling.

5.78 Construction Requirements

- a) The Contractor shall provide all basic materials like equipment, tools and experienced manpower necessary for carrying out the concrete work.
- b) All equipment, tools and machines to be used by the Contractor for the proper execution of the work shall be subject to DPA approval and shall be maintained in good condition till the completion of the work.

5.79 Concrete Requirements

A. Concrete Grades

Concrete shall be designated by the grades. Characteristic Compressive strength for different grades of concrete shall be as per **Table-1**:

Table-1: Grades of Concrete

Sl. No.	Group	Grade	Specified Characteristic Compressive Strength of 150 mm cube at 28 days in N/mm ²	Suggested Applications
1.	Ordinary Concrete	M10	10	Filling & mass concrete, Screed & Plain Cement Concrete under foundations or any other applications decided by DPA.
2.		M15	15	
3.		M20	20	Plain Cement Concrete under masonry walls, Damp-Proof Courses, levelling concrete, dense fire proofing & Trapezoidal Drain lining or any other applications decided by DPA.
4.	Standard Concrete	M25	25	Pavement in non-vehicular movement area, Reinforced concrete Electrical & Instrumentation road crossings, Slopes Protection or any other applications decided by DPA.
5.		M30	30	All structural concrete like liquid retaining structure, retaining walls, grade floors, Slabs, Walls, columns, foundations, Dykes, Equipment Foundations, Pipe Sleepers, Pile & Pile Caps, underground structures, Trench & Drains, Manholes & Pavement in vehicular movement area or any other applications decided by DPA.
6.		M35	35	Pre-cast Concrete or any other applications decided by DPA
7.		M40	40	

Notes:

- a) The characteristic strength is defined as the strength of material below which not more than 5 % of the test results are expected 10 falls.
- b) In the designation of concrete mix M refers to the mix and the number to the specified compressive strength of 150 mm size cube at 28 days, expressed in N/mm².

B. Properties of Concrete

Properties of concrete such as increase of strength with age, tensile strength of concrete, elastic deformation, shrinkage, creep of concrete, thermal expansion shall be in accordance with IS 456.

C. Workability of Concrete

- a) Concrete mix shall be made with appropriate quantity of water to achieve workability, consistency and plasticity, so that it has the proper slump for ease of conveying, handling, placing and compacting without segregation.
- b) The concrete mix proportions chosen should be such that the concrete is of adequate workability for the placing conditions of the concrete and can properly be compacted with the means available. Recommended ranges of workability as per **Table-2** which are measured in accordance with IS 1199.

Table-2: Recommended Workability of Concrete for Various Types of Construction

Sl. No.	Placing Conditions	Degree of Workability	Slump (mm)
1	Pile		140 to 160
2	Precast Beam & Slab		40
3	Cast-in-situ beam & slab		40
4	Pourable concrete cast in site		120
5	Footing		50
6	Columns, pillars, post, etc.,		50
7	Walls, pilasters, railing, etc.,		60

Notes:

- a) For most of the placing conditions, internal vibrators (needle vibrators) are suitable. The diameter of the needle shall be determined based on the density and spacing of reinforcement bars and thickness of sections. For tremie concrete, vibrators are not required to be used.
- b) In the “very low” category of workability where strict control is necessary, for example pavement & floorings concrete, measurement of workability by determination of compacting factor will be more appropriate than slump and a value of compacting factor of 0.75 to 0.80 is acceptable.
- c) In the “very high” category of workability, measurement of workability by determination of flow will be appropriate as per IS 9103.
- d) The slump of concrete mixes shall be measured by the Contractor’s Quality Control Engineer in the presence of DPA.

D. 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.

E. TYPE OF CONCRETE MIX

Unless otherwise noted on construction drawings, all lean / plain and reinforced concrete shall be nominal mix and design mix types, respectively.

a) Nominal Mix Concrete

Nominal mix concrete may be used for concrete of M20 or lower. The proportions of materials for nominal mix concrete shall be in accordance with Table-9 of IS 456.

b) Design Mixes for Blinding Concrete

The trial mix proportions for this concrete shall be left to the discretion of the Contractor. However, DPA may direct the contractor to carry out test whenever required. When they are selected, three (3) test mixes shall be made separately with these proportions and three (3) 150 mm test cubes shall be prepared from each mix for testing at 28 days. The trial mix proportions and water cement ratio shall be approved, if the average strength of the nine (9) cubes is not less than the specified characteristic strength.

c) Design Mixes for Structural Concrete

General

- a) The Contractor shall prepare the design mixes as per IS 10262 & SP 23 to produce the grade of concrete having the required workability and characteristic strength not less than appropriate values given in **Table-1**. The target mean strength of concrete mix shall be equal to the characteristic strength plus 1.65 times the standard deviation.
- b) As long as the quality of materials does not change, a mix design done earlier but not prior to one year may be considered adequate for later work. However, in case the quality of materials changes or there is a break in the continuity of construction and the same work is allocated to a new contractor, the contractor to provide a new design mix.
- c) Irrespective of the grade of concrete required to be produced as per characteristic strength criteria, the minimum cement content and maximum free water cement ratio in the design concrete shall be strictly maintained as stipulated in **Table-3** for the corresponding grade of concrete.
- d) Several trial batches shall be made by varying the relative amounts of fine & coarse aggregates, cement contents or maximum water cement ratio, aggregates grading as well as desired slump to achieve right kind of workability and design strengths of the specified concrete grades. If dense impermeable concrete is required to resist adequately the ingress of harmful salts, the approved retarding super plasticizer shall be used in the trial mixes.
- e) Test concrete mixes shall be produced by the Contractor, when the trial mixes have established the proposed workability and the required proportions and quantities of the aggregates per cubic metre (m^3) with admixtures (if used) for each grade of concrete, which shall then be tested as follows:
 - i) Five (5) test mixes shall be prepared separately and six (6) test cubes shall be made from each test mix for each grade of concrete in presence of DPA Representatives. The test cubes shall be made, cured and tested.
 - ii) Thirty (30) cubes of each grade of concrete shall be tested for crushing strength at 28 days and the mean strength, standard deviation shall be established for each grade.

Durability of Concrete

For achieving sufficiently durable concrete, strong, dense aggregates, low water-cement ratio and adequate cement content shall always be used. Workability of concrete shall be such that concrete can be completely compacted with the means available. Leak-proof formwork shall be used so as to ensure no loss of cement-slurry during pouring and compaction. Cover to reinforcement shall be uniform and as shown on construction drawings. Concrete mix design shall always take into account the type of cement, minimum cement content irrespective of the type of cement and maximum free water cement ratio and minimum grade of concrete conforming to the exposure conditions as mentioned in Table-3.

Table-3: Minimum Cement Content, Max. Water Cement Ratio and Min. Grade of Concrete for Different Exposures with Normal Weight Aggregates of 20 mm Nominal Maximum Size

Exposure	Plain Cement Concrete			Reinforced Cement Concrete		
	Minimum Cement Content (Kg/m ³)	Maximum Free Water Cement Ratio	Minimum Grade of Concrete	Minimum Cement Content (Kg/m ³)	Maximum Free Water Cement Ratio	Minimum Grade of Concrete
Mild	220	0.60	-	300	0.55	M20
Moderate	240	0.60	M15	300	0.50	M25
Severe	250	0.50	M20	320	0.45	M30
Very Severe	260	0.45	M20	340	0.45	M35
Extreme	280	0.40	M25	400	0.40	M40

Free Water Cement Ratio

- a) Once a mix, including its free water cement ratio, has been determined and approved for use by the DPA, that free water cement ratio shall be maintained. The Contractor shall determine the water content of the aggregates frequently as the work progresses, and the amount of mixing water shall be adjusted so as to maintain the approved free water cement ratio. Maximum free water-cement ratio shall be as per **Table-3** for different exposure condition.
- b) The minimum cement content as mentioned in **Table-3** shall be adjusted for aggregates other than 20 mm nominal maximum size. The minimum cement content in the concrete mix shall be increased by 40 kg/m³ and decreased by 30 kg/m³ for 10 mm and 40 mm nominal maximum size aggregates respectively. For maximum cement content refer IS 456.
- c) Water cement ratio shall be continuously checked at the mixer with due allowance being made for water (if any) contained in the aggregates. Under no circumstances, additional water shall be added between the mixing and the time of concrete placement. The Contractor may be asked by DPA representative to carry out further tests for water cement ratio on fresh concrete samples taken at the time of placement.

F. Admixtures for Concrete

Admixtures shall be added to concrete, if required at no extra cost. Admixtures like Auramix 300 (plasticizers / super plasticizers) of approved quality for improving workability of concrete if required shall be obtained only from the manufactures approved by the Nodal Officer or his nominee. The contractor shall obtain full details from the manufactures and shall carry out such filed test as the Nodal Officer shall require before any admixture is used in the works at the cost of the contractor. The admixture shall conform to IS 9103. For achieving required strength, micro silica (silica flume) is to be added; the same shall be done at no extra cost. The test for the admixture shall be conducted at IIT/NABL/Government/Govt. approved laboratory at the cost of contractor.

SPECIFICATION FOR CONCRETE PENETRATING CORROSION INHIBITING ADMIXTURE (CPCIA)

The corrosion inhibitor shall be water based organic type, cathodic and anodic having specific gravity of 1.04-1.06 at 25°C and viscosity of 10-20 secs by ford cupB-4. The inhibitor shall be mixed at the required dosage (Approx. 4 Kgs per cum) of mix design of concrete and shall have no deleterious effect on concrete of any grade and any cement and with any plasticizers. It is to be added in the batch water at the time of discharge in wet concrete and shall be considered in the mix design. The admixture must satisfy JIS-Z 1535 code requirement. The product shall be Auramix BCI or equivalent. The test for the admixture shall be conducted at IIT/NABL/Government/Govt. approved laboratory at the cost of contractor.

G. 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.

(iv) 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.

(iv) 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.

(v) 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.

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.

(vi) Concreting 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.

(v) 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.

(v) Cleaning and Treatment of Forms

All parts of the forms shall be thoroughly cleaned of old concrete, wood shavings, saw dust, dirt and dust sticking to them before they are fixed in position. All rubbish, loose concrete, chippings, shavings, saw dust etc., shall be scrupulously removed from the interior of the forms before concrete is poured. Compressed air jet and/ or water jet along with wire brushes, brooms etc., and shall be used for cleaning. The inside surface of the form work shall be treated with approved non- staining oil or other compound before it is placed in position.

Care shall be taken that oil or other compound does not come in contact with reinforcing steel or construction joint surfaces. They shall not be allowed to accumulate at the bottom of the form work. The oiling of the form work will be inspected just prior to placement of concrete and redone wherever necessary.

(v) Re-Use of Forms

Before re-use, all forms shall be thoroughly scraped, cleaned, joints and planes examined and when necessary repaired, and inside surface treated as specified herein before. Form work shall not be used/ re-used if declared unfit or unserviceable by the Nodal Officer or his nominee.

H. 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.

I. REINFORCEMENT

General

- a) The Contractor shall develop the bar bending schedule for all R.C.C structures and structural parts and shall get it reviewed by the DPA. Reinforcement shall be cut and bent to shape as per dimensions shown in the bar bending schedule or in the construction drawings.
- b) If protective fusion bonded epoxy coating is required to be applied on reinforcement bars, the same shall be done as per IS 13620. All repairs to applied protective coating required due to mishandling or bending of reinforcement bars shall also be done as per relevant clauses of IS 13620.

Straightening, Cutting and Bending

- a) All reinforcing bars shall be cut, bent or formed to the dimensions and configurations as per the bar bending schedules prepared by the Contractor from the approved construction drawings, and shall be within the tolerances specified in IS 2502.
- b) In case bars are supplied in coils, they shall be smoothly straightened without any kinks. Cold twisted deformed bars shall be bent cold. Bars larger than 25 mm in size (except cold twisted deformed bars) may be bent hot at cherry red heat to a temperature not exceeding 8500 Celsius as per the instructions of the DPA. The bars shall be allowed to cool gradually without quenching.

- c) Bars shall be bent in a slow and regular movement to avoid fractures. A second bending of reinforcement bars shall be avoided but when reinforcement bars are bent aside at construction joints and afterwards bent back into their original position, care should be taken to ensure that at no time is radius of the bend less than **4 times** bar diameter for plain mild steel or **6 times** bar diameter for high strength deformed bars. Care shall also be taken when bending back bars to ensure that concrete around the bars is not damaged. All bars shall be properly tagged for easy identification.
- d) Bars which develops cracks or splits after bending shall be rejected. Reinforcing bars having a reduced section, kinks and visible transverse cracks at bends or otherwise damaged shall not be used and shall be removed from the site.
- e) Reinforcing bars shall not be tack or spot-welded for any purpose. Fully welded splice or other welding to reinforcement shall be permitted as an exception by DPA, only after the Contractor's proposed method of welding appropriate to the grade of steel and type of welding rod has been found satisfactory & approved.

Minimum Cover to Main 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.

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.

Bar Bending Schedule

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,

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.

Placing & 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.

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 IS: 456

Cleaning of Reinforcement

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.

vSplicing or Overlapping

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.

MORTAR AND GROUT

- **Cement Mortar**

The proportions by weight of cement to fine aggregate in mortar shall be as shown on the Drawings or as otherwise directed. The mortar shall be thoroughly mixed with just sufficient water to make a homogeneous and Workable mix.

The use of plasticizers or other additives will not be permitted without the prior approval of the Nodal Officer or his nominee and the Contractor shall carry out at his own cost such tests on additive as the Nodal Officer or his nominee may direct. Mortar shall be used within half an hour of adding the water to the dry ingredients. Precast members shall be jointed to each other with cement mortar 1:1 ratio at contact surface.

- **Grout**

Except where otherwise specified or directed by the Nodal Officer or his nominee, grout shall be colloidal grout produced in plant approved by the Nodal Officer or his nominee. Neat cement shall be used unless otherwise shown on the drawings or directed by the Nodal Officer or his nominee, where the proportion by weight of cement to fine aggregate will be specified.

- **Grouting under Base Plate**

Grouting shall be done after erection of the structural steel, unless otherwise approved by the Nodal Officer or his nominee. The contractor shall furnish all shims and level all base plates to the proper elevations before grouting.

The pedestal surfaces which are to receive the grout shall be thoroughly cleaned immediately prior to the grouting operation. The grout shall be carefully worked under the base plates, and shall completely fill the space between the underside of the base plates and the concrete pedestal including voids around anchor bolts. After the grout had its initial set, the grout shall be cut back flush with the base plates and the surplus grout shall be removed. Before leaving the site, the contractor shall retighten the nuts of anchor bolts.

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 free of cost 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.

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.

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.

FAULTY WORK

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

Repair and Replacement of Unsatisfactory Concrete

- a) After the formwork being removed, the exposed concrete shall be thoroughly inspected for any surface defects such as honeycombs, blisters, shrinkage cracks, scaling, crazing, curling, wavy surfaces, uneven colour shall be identified & reported to DPA.
- b) Concrete if found not meeting the requirements of surface finishes as specified in this specification, shall be repaired by the Contractor to the complete satisfaction of DPA.
- c) The Contractor shall ensure that the replaced or repaired concrete shall not be a source of potential ingress of chlorides or any harmful chemicals and shall be as good as the original concrete regarding impermeability, strength, durability & desired surface finishes.
- d) Repair shall be made as soon as possible after the forms are removed and before the concrete becomes too hard with prior permission from the DPA, in writing. Stone pockets, segregation patches and damaged areas shall be chipped out and the edges undercut slightly to form a key. All loose material shall be washed out before patching. No excess water shall be left in the cavity, but the concrete shall be damp. A good bond between the patch and parent concrete shall be obtained by sprinkling dry cement on the wet surface or by throwing mortar with force on to the wetted concrete, or by brush in a coat of thick cement grout of about 1: 1 (1 cement: 1 sand) just before applying the patching material. Before this has dried, the remainder of the patch shall be filled with mortar or concrete, depending on the extent of the repair.
- e) Cement concrete or mortar used in repair of exposed surfaces shall be made with cement from the same source as that used in concrete and blended with sufficient amount of white Portland cement to produce the same colour as in the adjoining concrete. The proportions of ingredients shall be same as those used in parent concrete. The mortar shall be as dry as possible and well compacted into the cavity. All filling shall be tightly bonded to the concrete and shall be sound, free from shrinkage cracks after the filling has been cured and dried.

- f) For larger repairs to hardened concrete, necessary formwork bearing tightly at the edges of the cavity shall be provided. Concrete shall be chipped out to a depth of at least 100 mm and preferably 150 mm. Mortar shall be scrubbed into all surfaces with a wire brush before placing the concrete. Damaged reinforcement shall be adequately spliced with new steel so as to maintain the original strength. Additional reinforcement, if required in the patch, shall be provided as per the instructions of DPA.
- g) In case in the opinion of the DPA defects in the concrete is excessive or beyond repair, the contractor shall either redo the structure or take other remedial measures as instructed by the DPA.
- h) Approved epoxy formulation for bonding fresh concrete used for repairs with already hardened concrete shall be used by the Contractor if asked by the DPA. Epoxy shall be applied in strict accordance with instructions of the manufacturer.
- i) All repair works due to non-conformance or non-adherence to specification, if allowed by the DPA, shall be carried out free of cost.

Immediately after patching is completed, the patched area shall be covered with an approved non-staining water saturated material which shall be kept wet and protected against sun and wind for a period of 12 hours. Thereafter, the patched area shall be kept continuously wet by fine spray or sprinkling for not less than 10 days.

J. Special condition in respect of cement.

- (1) The contractor shall procure 53 grade (conforming to IS 269-1989) OPC cement, as required in the work, from reputed manufacturers of cement having a production capacity not less than one million tons or more per annum as approved by the Ministry of Industry, Government of India, and holding license to use ISI certification mark for their product.
- (2) The supply of cement shall be taken in 50 kg. bags bearing manufacturer's name, date of manufacturing, batch number and ISI marking. The cement shall be brought at site in bulk supply of approximately 50 tons or as decided by the Engineer- in- charge. The cement godown of the capacity to store a minimum of 200 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. In case of big projects with mass consumption of cement, the same can be brought in Silos.
- (3) Samples of cement arranged by the contractor shall be taken by the Engineer-in-charge and got tested in accordance with provisions of relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not conform to the relevant BIS codes, the same shall stand rejected, and it shall be removed from the site by the contractor at his own cost within a week's time of written order from the Engineer- in-charge to do so. The cement shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to testing laboratories. The cost of tests shall be borne by the contractor.
- (4) Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-Charge or his authorized representative and the keys of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer- in- Charge at any time.
- (5) The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in the contract and shall be governed by conditions

laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment need be made.

- (6) The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer- in- charge. If he does not do so within 3 days of receipt of such notice, the Engineer-in-charge shall get it removed at the cost of the contractor.
- (7) The cement procured by the contractor should not have aged more than 6 weeks. The original bills for verification to this effect shall be submitted with every bill of measurement.

K. Special conditions for steel

- (1) The contractor shall procure TMT bars of Fe415/ Fe500/ Fe550 and CRS grade as per tender conditions.
 - (a) The grade of the steel such as Fe415/Fe500/Fe 550 or other grade to be procured is to be specified as per BIS 1786-2008.
 - (b) The TMT bars procured from primary producers shall conform to manufacture's specifications.
 - (c) The TMT bars procured shall conform to the specifications.
 - (d) For TMT bars procured either from primary producers or secondary producers, the specifications shall meet the provisions of IS 1786: 2008 pertaining to Fe 415D or Fe 500D or Fe 550D grade of steel as specified in the tender.
- (2) The contractor shall have to obtain and furnish test certificates to the Engineer-in- charge in respect of all supplies of steel brought by him to the site of work.
- (3) Samples shall also be taken and got tested by the Engineer-in-Charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para (1) above, the same shall stand rejected, and it shall be removed from the site of work by the contractor at his cost within a week's time of written orders from the Engineer-in-Charge to do so.
- (4) The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent their distortion and corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
- (5) For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random, and at frequency not less than that specified below:

Size of bar	For consignment below 100MT	For consignment above 100MT
Under 10 mm dia bars	One sample for each 25 MT or part thereof	One sample for each 40 MT or part thereof
10mm to 16mm dia bars	One sample for each 35 MT or part thereof	One sample for each 45 MT or part thereof
Over 16mm dia bars	One sample for each 45 MT or part thereof	One sample for each 50 MT or part thereof

- (6) The steel procured by contractor should not have aged more than 6 weeks. The original bills to this effect shall be submitted with every bill of measurement.
- (7) The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories and the testing charges shall be borne by the contractor.
- (8) The actual issue and consumption of steel on work shall be regulated and proper accounts maintained. The theoretical consumption of steel shall be worked out as per procedure prescribed in the contract. In case the consumption is less than theoretical consumption including permissible variations (+3% for cutting into pieces +/- 2% for variation in weight) recovery at the rate so prescribed shall be made. In case of excess consumption, no adjustment need to be made.

L. SUPPLY OF WATER

- (1) The contractor shall have to make his own arrangements for the water required for execution of work and for labours etc.
- (2) 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.
- (3) Unfiltered potable water is generally considered suitable for mixing and curing. Mixing and curing with sea water shall not be permitted in any case.
- (4) 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 10 ml of 0.1 normal HCL.

5.80 STEEL STRUCTURE SPECIFICATION

A. DEFINITIONS/ TERMINOLOGY

i) Bead

A single run of weld metal deposited on surface.

ii) Butt Weld

A weld in which the weld metal lies substantially within the extension of the planes and the surfaces of the parts joined.

iii) Crater

A depression left in weld metal where the *arc* was broken or the flame was removed.

iv) End Crater

A crater at the end of a weld or at the end of a joint.

v) Fillet Weld

A weld of approximately triangular cross-section joining two surfaces approximately at the right angles to each other in a lap joint, tee joint or corner joint. It is of two types:

- (1) Continuous
- (2) Intermittent.

vi) Fusion Welding

Any welding process in which the weld is made between metals in a state of fusion without hammering or pressure.

vii) **Non- fusion Welding**

A term applied to the deposition, by the Oxy-Acetylene process of filler metal on parent metal without fusion of the latter.

Oxy-Acetylene Pressure Welding

Pressure welding in which any Oxy-Acetylene flame is used to make the surface to be united plastic. No filler metal is used.

viii) **Run**

The metal deposited during one passage of the electrode or blow pipe in the making of a joint.

ix) **Weld**

A union between two pieces of metal at faces rendered plastic or liquid by heat or pressure, or both, Filler metal may be used to effect the union.

B. MATERIALS

i) **Micro-Alloying Elements**

Elements such as niobium, boron, vanadium and titanium added singly or in combination to obtain higher strength to weight ratio and better toughness, formability and weldability as compared to unalloyed steel of similar strength level.

ii) **Weldability**

A metallic substance is considered to be weldable by a given process and for the given purpose, when metallic continuity to a stated degree can be obtained by welding using a suitable procedure, so that the joints comply with the requirements specified in regard to both their local properties and their influence on the construction of which they form a part.

iii) **Controlled Rolling**

A hot rolling process in which the temperature of the steel and its reduction ratio are controlled, particularly during the final rolling passes, in order to achieve fine grain micro structure and optimum mechanical properties.

iv) **Normalizing Rolling**

A hot rolling process in which the final rolling passes are carried out at a suitable higher temperature, followed by cooling in natural air to a temperature below the transformation temperature, in order to produce a structure, analogous to that obtained by a separate normalizing treatment of hot rolled product.

I. Structural Steel

1. **Supply of Material:** General requirements relating to supply of structural steel shall conform to IS 8910.
2. **Grades:** There shall be nine grades of steel as given in Tables 10.1 and 10.2. While placing the order the steel should be designated by 'Designation' (See Table 10.1 and 10.2).
3. **Manufacture:** The processes used in the steel making and further hot rolling into steel plates, strips, sections, flats, bars, etc., are left to the discretion of the

manufacturer/supplier. If required, secondary refining may follow steel making, as also normalizing rolling/controlled rolling during manufacturing of sections or as per the agreement between the purchaser and the manufacturer/supplier.

4. ***Freedom from Defects***

All finished materials shall be well and cleanly rolled to the dimensions, sections and masses specified. The finished material shall be reasonably free from surface flaws; laminations; rough/ jagged and imperfect edges and all other harmful defects.

Minor surface defects may be removed by the manufacturer/supplier by grinding provided the thickness is not reduced locally by more than 4 percent below the minimum specified thickness. Reduction in thickness by grinding greater than 4 percent but not exceeding 7 percent may be made subject to mutual agreement between the purchaser and manufacturer/supplier.

Subject to agreement with the purchaser, surface defects which cannot be dealt & may be repaired by chipping or grinding followed by welding and inspection by a mutually agreed procedure such that :

- (a) After complete removal of the defects and before welding, the thickness of the item is not to be reduced by more than 20 percent at any place.
- (b) Welding is carried out by procedure APPROVED by competent authority with approved electrodes and the welding is ground smooth to the correct nominal thickness; and
- (c) Subsequent to the finish grinding, the item may be required to be normalized or otherwise heat-treated at the purchaser's discretion.

Welding as mentioned in above is not permissible for grade designation E 250 material

5. ***Chemical Composition:*** Ladle Analysis the ladle analysis of the steel, when carried out by the method specified in the relevant part of IS 228 or any other established instrumental /chemical method, shall be as given in Table 10.1. In case of dispute, the procedure given in IS 228 and its relevant parts shall be the referee method and where test methods are not specified shall be as agreed to between the purchaser and the manufacturer/supplier.

6. **Rivets**

Rivets shall be made from rivet bars of mild steel as per IS 1148.

7. **Bolts**

These are of two types namely turned and fitted bolts and black bolts. Turned & fitted bolts are turned to exact diameter in automatic lathe. For these bolts, whether reamed or drilled bolts, the same unit stresses are allowed as for rivets. In case of black bolts which are not finished to exact sizes, a lower working stress other than for turned bolts is adopted. They shall conform to IS 1367 – Technical supply conditions for threaded steel fasteners.

8. **Electrodes**

The electrodes required for metal arc welding shall be covered electrodes and shall conform to IS 814.

II. STEEL WORK IN SINGLE SECTION FIXED INDEPENDENTLY WITH CONNECTING PLATE

The steel work in single section of R.S. joists, flats, Tees Angles fixed independently with or without connecting plate, is described in these clauses.

1. Fabrication

The steel sections as specified shall be straightened and cut square to correct lengths and measured with a steel tape. The cut ends exposed to view shall be finished smooth. No two pieces shall be welded or otherwise jointed to make up the required length of member. All straightening and shaping to form, shall be done by pressure. Bending or cutting shall be carried out in such a manner as not to impair the strength of the metal.

2. Painting

All surfaces which are to be painted, oiled or otherwise treated shall be dry and thoroughly cleaned to remove all loose scale and loose rust. Surfaces not in contact but inaccessible after shop assembly, shall receive the full specified protective treatment before assembly. This does not apply to the interior of sealed hollow sections. Part to be encased in concrete shall not be painted or oiled. A priming coat of approved steel primer such as Red Oxide/Zinc Chromate primer conforming to IS 2074 shall be applied before any member of steel structure are placed in position or taken out of workshop.

3. Erection

Steel work shall be hoisted and placed in position carefully without any damage to itself and other building work and injury to workmen. Where necessary mechanical appliances such as lifting tackle winch etc. shall be used. The suitability and capacity of all plant and equipment used for erection shall be up to the satisfaction of the Engineer-in-charge.

4. Measurements

The work as fixed in place shall be measured in running metres correct to a millimetre and weights calculated on the basis of standard tables correct to the nearest kilogram. The standard weight of steel sections shall conform to IS 808 with tolerance in sizes as per IS 1852. Tolerance in weight is given in Table 10.3. Steel sections shall be acceptable within tolerance limits. Payment for steel sections shall be made as per actual weight within tolerances. Sections having weight on higher side than permissible tolerance, may be acceptable but payment shall be made on the basis of standard weight only. Steel sections having weight variations lower side than permissible variation shall not be acceptable. Unless otherwise specified, weight of cleats, brackets, packing pieces, bolts, nuts, washers, distance pieces, separators, diaphragm gussets (taking overall square dimension) fish plates, etc. shall be added to the weight of respective items. In riveted work allowance is to be made for weight of rivet heads. Unless otherwise specified an addition of 2.5% of the weight of structure shall be made for shop and site rivet heads in riveted steel structures. No deduction shall be made for rivet/ or bolt holes (excluding holes for anchor or holding down bolts). Deduction in case of rivet or bolt hole shall however be made if its area exceeds 0.02 sqm. The weight of steel sheets, plates and strips shall be taken from relevant Indian standards based on 7.85 Kg/m² for every millimeter sheet thickness. For rolled sections, steel rods and steel strips, weight given in relevant Indian Standards shall be used.

Rate

Rate includes the cost of labour and materials required for all the operations described above.

III. STEEL WORK IN BUILT UP SECTIONS (RIVETED AND BOLTED)

The steel work in built up section (Riveted and bolted) such as trusses, framed work etc. is specified in this clause.

1. Laying Out

A figure of the steel structure to be fabricated shall be drawn on a level platform to full scale. This may be done in full or in parts, as shown on drawings or as directed by the Engineer-in-Charge. Steel tape shall be used for measurements.

2. Fabrication

Fabrication shall generally be done as specified in IS 800. In major works or where so specified, shop drawings giving complete information for the fabrication of the component parts of the structure including the location, type, size, length and details or rivets, bolts or welds, shall be prepared in advance of the actual fabrication and approved by the Engineer- in-charge. The drawings shall indicate the shop and field rivets, bolts and welds. The steel members shall be distinctly marked or stenciled with paint with the identification marks as given in the shop drawings.

Great accuracy shall be observed in the fabrication of various members, so that these can be assembled without being unduly packed, strained or forced into position and when built up, shall be true and free from twist, kinks, buckles or open joints. Wooden or metal sheet templates shall be made to correspond to each member, and position of rivet holes shall be marked accurately on them and holes drilled. The templates shall then be laid on the steel members, and holes for riveting and bolting marked on them. The ends of the steel members shall also be marked for cutting as per required dimensions. The base of steel columns and the positions of anchor bolts shall be carefully set out at the required location.

The steel section shall be straight or to be straightened or flattened by pressure unless required to be of curvilinear form and shall free from twists. These shall be cut square either by shearing or sawing to correct length and measured by steel tape. No two pieces shall be welded or joined to make up for the required length of member.

- 3. Making Holes : Holes through more than one thickness of materials for** members, such as compound stanchion and girder flanges shall, where possible, be drilled after the members are assembled and tightly clamped or bolted together. Punching may be permitted before assembly, provided the holes are punched 3mm less in diameter than the required size and reamed after assembly to the full diameter. The thickness of material punched shall be not greater than 16 mm.

4. Rivet Holes

The diameter for rivets and black bolts holes shall be taken as the nominal diameter of a rivet/ black bolts plus 1.5 mm for rivets/ bolts of nominal diameter less than or equal to 25 mm” and 2.0 mm for rivets of nominal diameter exceeding 25 mm, unless specified otherwise. Holes for turned and fitted bolts shall be drilled or reamed large by 0.2 to 8 mm depending upon the dia. of bolts. Holes shall have their axis perpendicular to the surface bored through. The drilling or reaming shall be free from burrs, and the holes shall be clean and accurate. Holes for rivets and bolts shall not be formed by gas cutting process. Holes for counter sunk bolts shall be made in such a manner that their heads sit flush with the surface after fixing.

5. Assembly

Before making holes in individual members, for fabrication and steel work intended to be riveted or bolted together shall be assembled and clamped properly and tightly so as to ensure close abutting, or lapping of the surfaces of the different members. All stiffeners shall be fixed (or placed) tightly both at top and bottom without being drawn or caulked. The abutting joints shall be cut or dressed true and straight, and fitted close together.

Web plates of girders, which have no cover flange plates, shall have their ends flush with the tops of angles unless otherwise required. The web plate when spliced, shall have clearance of not more than 5mm. The erection clearance of cleated ends of members connecting steel to steel shall preferably be not greater than 1.5 mm. The erection clearance at the ends of beams without web cleats shall not be more than 3 mm at each end but where for practical reasons, greater clearance is necessary, seating designed suitably shall be provided. Column splices and butt joints of struts and compression members *requiring* contact for stress transmission shall be accurately, machined and close butted over the whole section. In column caps and bases, the ends of shafts together with the attached gussets, angles, channels etc. after riveting together shall be accurately machined so that the parts connected, butt against each other over the entire surfaces of contact. Connecting angles or channels shall be fabricated and placed in position with great accuracy so that they are not unduly reduced in thickness by machining. The ends of all bearing stiffeners shall be machined or grounded to fit tightly both at top and bottom.

6. Riveting

Rivets shall be used, where slip under load has to be avoided.

Preliminaries before Rivetings: - Members to be riveted shall have all parts firmly placed and held together before and during riveting, and special care shall be taken in this respect for all single riveted connections. For multiple riveted connections, a service bolt shall be provided in every third or fourth hole.

7. Process of Riveting

The riveting shall be carried out by using machines of the steady pressure type. However, where such facilities are not available hand riveting may be permitted by the Engineer-in-charge. The rivets shall be heated red hot, care being taken to control the temperature of heating so as not to burn the steel. Rivets of diameter less than 10mm may be driven cold. Rivets shall be finished neat with heads full and of equal size. The heads shall be central on shanks and shall grip the assembled members firmly.

All loose, burnt, or badly formed rivets with eccentric or deficient heads shall be cut out and replaced. In cutting out rivets, care shall be taken so as not to injure the assembled members. Caulking and recapping shall not be permitted.

For testing rivets, a hammer weighing approx. 0.25 kg shall be used and both heads of the rivet (Specially the machine head) shall be tapped. When so tested, the rivets shall not give a hollow sound and a jar where so specified, other tests shall be carried out to ensure the soundness of rivets.

All rivets heads shall be painted with approved steel primer paint within a week of their fixing.

8. Bolting

The nominal length of the bolt shall be the distance from the underside of the head to the further end of the shank. The nominal diameter of the bolt shall be the diameter at the shank above the screwed threads. Bolts, nuts and washers shall be thoroughly cleaned and dipped in double boiled linseed oil, before use. All bolts heads and nuts shall be hexagonal unless specified otherwise. The screwed threads shall conform to IS 1363 and the threaded surface shall not be tapered. The bolts shall be of such length as to project at least two clear threads beyond the nuts when fixed in position, and these shall fit in the holes without any shake. The nuts shall fit in the threaded ends of bolts properly. Where necessary, washers shall be tapered or otherwise suitably shaped to give the heads and nuts of bolts a satisfactory bearing. The threaded portion of each bolt shall project through the nut at least two thread. In all cases where the full bearing area of the bolt is to be developed, the bolt shall be provided with a washer of sufficient thickness under the nuts to avoid any threaded portion of the bolt being within the thickness of the parts bolted together.

Where there is a risk of the nuts being removed or becoming loose due to vibrations or reversal of stresses, these shall be secured from slackening by the use of lock nut, spring washers as directed by the Engineer-in-charge.

9. Erection

Steel members shall be hoisted and erected in position carefully, without any damage to itself, other structures and equipment and injury to workmen. The method of hoisting and erection proposed to be adopted by the contractor shall be got approved from the Engineer-in-charge in advance. The contractor however shall be fully responsible for the work being carried out in a safe and proper manner without unduly stressing the various members and proper equipment such as derricks, lifting tackles, winches, ropes etc. shall be used.

1. The work of erection may be done in suitable units as may be directed by the Engineer-in charge. Fabricated members shall be lifted at such points so as to avoid deformation or excessive stress in members. The structure or part of it placed in position shall be secured against over-turning or collapse by suitable means. During execution, the steel members shall be securely bolted or otherwise fastened when necessary temporarily braced to provide for all loads including those due to erection equipments and its operation to be carried safely by structure during erection. The steel members shall be placed in proper position as per approved drawing, final riveting or permanent bolting shall be done only after proper alignment has been checked and confirmed.
2. Trusses shall be lifted only at nodes. The trusses above 10 m in span shall not be lifted by slinging at two mid points of rafters, which shall be temporary braced by a wooden member of a suitable section. After the trusses are placed in position, purlins and wind bracings shall be fixed as soon as possible. The end of the truss which faces the prevailing winds shall be fixed with holding down bolts, and the other end kept free to move. In case of trusses of spans up to 10m the free end of the truss shall be laid on lead sheet or steel plate as per design, and the holes for holding down bolts shall be made in the form of oblong slots so as to permit the free movements of the truss end. For larger spans the truss shall be provided with proper bearing as per design.
3. Columns and stanchions shall be erected truly vertical with the necessary cross bracing etc. and the base shall be properly fixed with the foundation concrete by means of anchor bolts etc. as per drawing.

4. Anchor bolts to be placed in the concrete foundation should be held in position with a wooden template. At the time of concreting anchor bolt locations shall be provided with suitable timber mould or pipe sleeve to allow for adjustment which shall be removed after initial setting of concrete. The spaces left around anchor bolts shall be linked to a stopping channel in the concrete leading to the side of the pedestal and on the underside of the base plate to allow the spaces being grouted up after the base plate is fixed in the position along with the column footing. Grouting shall be of cement mortar 1:3 (1 cement: 3 coarse sand) or as specified.

10. Bedding of Column, Stanchions etc.:- Bedding shall not be carried out until the steel work has been finally levelled, plumbed and connected together. The stanchion shall be supported on steel wedges and adjusted to make the column plumb. For multi-storeyed buildings, the bedding shall not be done until sufficient number of bottom lengths of stanchions have been properly lined, levelled and plumbed and sufficient floor beams are fixed in position. The base plates shall be wedged clear of the bases by M.S. wedges and adjusted where necessary to plumb the columns. The gaps under the base plate may be made upto 25 mm which shall be pressure grouted with cement grouts. With small columns, if permitted by the Engineer-in-charge, the column base shall be floated on a thick cement grout on the concrete pedestal. The anchor bolt holes in the base plate may be made about 10 to 15 mm larger than the bolts. In such cases suitable washers shall be provided.

11. Painting

Before the members of the steel structure are placed in position or taken out of the workshop these shall be painted in accordance with the specifications.

12. Measurements

The work as fixed in position shall be measured in running metres correct to a millimeter and their weight calculated on the basis of standard tables correct to the nearest kilogram.

The standard weight of steel sections shall conform to IS 808 with tolerance in sizes as per IS1852. Tolerance in weight is given in Table 10.3. Steel sections shall be acceptable within tolerance limits. Payment for steel sections shall be made as per actual weight within tolerances. Sections having weight on higher side than permissible tolerance, may be acceptable but payment shall be made on the basis of standard weight only. Steel sections having weight variations lower than permissible variation shall not be acceptable.

Unless otherwise specified. Weight of cleats, brackets, packing pieces, bolts nuts, washers, distance pieces, separators diaphragm gussets (taking overall square dimensions) fish plates etc. shall be added to the weight of respective items. No deductions shall be made for skew cuts. In riveted work, allowance is to be made for weight of rivet heads. Unless otherwise specified and addition of 2.5% of the weight of structure shall be made for shop and site rivet heads in riveted steel structures.

No deduction shall be made for rivet/ or bolt holes (excluding holes for anchor or holding down bolts). Deduction in case of rivet or bolt hole shall, however, be made if its area exceeds 0.02 m².

The weight of steel sheet and strips shall be taken from relevant Indian Standards based on 7.85 kg/m² for every millimetre sheet thickness. For rolled sections, steel rods and steel strips, weight given in relevant Indian Standards shall be used.

IV. STEEL WORK IN BUILT UP SECTION (WELDED)

The steel work in built up sections (welded) such as in trusses, form work etc. is specified in this clause.

1. Fabrication

Straightening, shaping to form, cutting and assembling, shall be as per above mentioned clause as far as applicable, except that the words "riveted or bolted" shall be read as "welded" and holes shall only be used for the bolts used for temporary fastening as shown in drawings.

2. **Welding** : Welding shall generally be done by electric arc process as per IS 816 and IS 823.

The electric arc method is usually adopted and is economical. Where electricity for public is not available generators shall be arranged by the contractor at his own cost unless otherwise specified. Gas welding shall only be resorted to using oxyacetylene flame with specific approval of the Engineer in-charge. Gas welding shall not be permitted for structural steel work Gas welding required heating of the members to be welded along with the welding rod and is likely to create temperature stresses in the welded members. Precautions shall therefore be taken to avoid distortion of the members due to these temperature stresses.

The work shall be done as shown in the shop drawings which should clearly indicate various details of the joint to be welded, type of welds, shop and site welds as well as the types of electrodes to be used. Symbol for welding on plans and shops drawings shall be according to IS 813.

As far as possible every efforts shall be made to limit the welding that must be done after the structure is erected so as to avoid the improper welding that is likely to be done due to heights and difficult positions on scaffolding etc. apart from the aspect of economy. The maximum dia. of electrodes for welding work shall be as per IS 814. Joint surfaces which are to be welded together shall be free from loose mill scale, rust, paint, grease or other foreign matter, which adversely affect the quality of weld and workmanship.

3. **Precautions** : All operation connected with welding and cutting equipment shall conform to the safety requirements given in IS 818 for safety requirements and Health provision in Electric and gas welding and cutting operations.

Inspection and testing of welds shall be as per IS 822.

4. **Assembly** : Before welding is commenced, the members to be welded shall first be brought together and firmly clamped or tack welded to be held in position. This temporary connection has to be strong enough to hold the parts accurately in place without any disturbance. Tack welds located in places where final welds will be made later shall conform to the final weld in quality and shall be cleaned off slag before final weld is made.

5. **Erection** : The specification shall be as described above except that while erecting a welded structure adequate means shall be employed for temporary fastening the members together and bracing the frame work until the joints are welded. Such means shall consists of applying of erection bolts, tack welding or other positive devices imparting sufficient strength and stiffness to resist all temporary loads and lateral forces including wind. Owing to the small number of bolts ordinarily employed for joints which are to be welded, the temporary support of heavy girders carrying columns shall be

specially attended. Different members which shall be fillet welded, shall be brought into as close contact as possible. The gap due to faulty workmanship or incorrect fit if any shall not exceed 1.5 mm if gap exceeds 1.5 mm or more occurs locally the size of fillet weld shall be increased at such position by an amount equal to the width of the gap.

6. **Painting** : Before the member of the steel structures are placed in position or taken out of the workshop these shall be painted as specified above.

7. Measurements

The mode of measurements shall be the same as above mentioned except that weight of welding material shall not be added in the weight of members for payment and nothing extra shall be paid for making and filling holes for temporary fastening of members during erection before welding.

MECHANICAL PROPERTIES AND CHEMICAL COMPOSITION OF STEEL

TABLE 10.1
Chemical Composition

Grade Designation	Quality	Ladle analysis, Percent, Max					Carbon Equivalent (CE), Max	Method of Deoxidation ¹
		C	Mn.	S	P	Si		
1	2	3	4	5	6	7	8	9
E 165 (Fe 290)	-	0.25	1.25	0.045	0.045	-	-	Semi-killed or killed
E 250 (Fe 410 W)	A	0.23	1.50	0.045	0.045	0.40	0.42	Semi-killed or killed
E 250 (Fe 410 W)	B	0.22	1.50	0.045	0.045	0.40	0.41	Killed
E 250 (Fe 410 W)	C	0.20	1.50	0.040	0.040	0.40	0.39	Killed
E 300 (Fe 440)	-	0.20	1.30	0.045	0.045	0.45	0.40	Semi-killed or killed
E 350 (Fe 490)	-	0.20	1.50	0.045	0.045	0.45	0.42	Semi-killed or killed
E 410 (Fe 540)	-	0.20	1.60	0.045	0.045	0.45	0.44	Semi-killed or killed
E 450 (Fe 570)	D	0.22	1.60	0.045	0.045	0.45	0.46	Semi killed or killed
E 450 (Fe 590)	E	0.22	1.80	0.045	0.045	0.45	0.48	Semi killed or killed

Notes:

1. Carbon equivalent (CE) based on ladle analysis =

$$\frac{\text{Mn}}{\text{C} + 6} + \frac{(\text{Cr} + \text{Mo} + \text{V})}{5} + \frac{(\text{Ni} + \text{Cu})}{15}$$

2. When the steel is killed by aluminium alone, the total aluminium content shall not be less than 0.02 per cent. When the steel is killed by silicon alone, the silicon content shall not be less than 0.10 per cent. When the steel is silicon-aluminium killed, the silicon content shall not be less than 0.30 per cent and total aluminium content shall not be less than 0.01 per cent.
3. Micro alloying element like Nb, V, Ti and B shall be added singly or in combination. Total micro alloying element shall not be more than 0.25.
4. New grades designation system based on yield stress has been adopted, simultaneously old designations have also been given in parentheses.
5. Steel of qualities A, B and C are generally suitable for welding processes. The weldability increases from quality A to C.
6. Copper may be present between 0.20 to 0.35 per cent as mutually agreed to between the purchaser and the manufacturer. The copper bearing quality shall be designated with a suffix Cu, for example, E 250 Cu. In case of product analysis, the copper content shall be between 0.17 and 0.38 per cent.
7. Nitrogen content of steel shall not exceed 0.012 per cent which shall be ensured by the manufacturer by occasional check analysis. For micro alloyed steel this is to be reduced to 0.009 per cent.

8. The steel, if required may be treated with rare earth element for better formability.
 9. Lower limits for carbon equivalent and closer limits for other elements may be mutually agreed to between the purchaser and the manufacturer.
 10. Incidental element-Elements not quoted in Table 1 shall not be intentionally added to steel without the agreement of the purchaser, other than for the purpose of finishing the heat. All reasonable precautions shall be taken to prevent the addition from scrap or other materials used in manufacture of such elements which affect the hardenability, mechanical properties and applicability.
1. "To be supplied subject to the agreement between the purchaser and the manufacturer".

TABLE 10.2
Mechanical Properties

Grade Designation	Quality	Tensile strength Min. MPa	Yield stress, ReH Min. MPa			Percentage elongation at Gauge length L_0 5.65 $\sqrt{S_0}$ Min.	Internal Bend Diameter (Min.)		Charpy V-Notch Impact Energy Min. J	
			<20	20-40	>40		< 25	>25	at Room Temp.	At 20°C
1	2	3	4	5	6	7	8	9	10	11
E 165 (Fe 290)	-	290	165			23	2t	-	-	-
E 250 (Fe 410 W)	A	410	250	240	230	23	3t	2t	-	-
E 250 (Fe 410 W)	B	410	250	240	230	23	2t	3t	27 (See Note 3)	
E 250 (Fe 410 W)	C	410	250	240	230	23	2t	3t	27 (See Note 3)	
E 300 (Fe 440)	-	440	300	290	280	22	2t	3t	50	30
E 350 (Fe 490)	-	490	350	330	320	22	2t	3t	50	25
E 410 (Fe 540)	-	540	410	390	380	20	2t	3t	50	25
E 450 (Fe 570)	D	570	450	430	420	20	2t	3t	45	20
E 450 (Fe 590)	E	590	450	430	420	20	2t	3t	45	20

- 1 1 MPa= 1MN/m² = 0.102 kgf/mm² =144.4 psi
- 2 Temperature of Charpy impact values will be subject to mutual agreement.
- 3 The more stringent requirements than those given above may be as agreed to between the purchaser and the manufacturer.

TABLE 10.3

Sl. No.	Steel Section	Tolerance in weight per meter percentage		Standard weight as per IS
		Plus Side	Minus Side	
(i)	Beams and columns (RS joists)	(a) Beams \leq 200 mm (+) 4 (b) > 200 mm 2.5	(-) 1 2.5	IS 808
(ii)	Channels	2.5	2.5	IS 808
(iii)	Equal and unequal leg Angles			
	(a) upto 3 mm thickness	5	5	IS 808
	(b) Over 3 mm thickness	5	3	
(iv)	Tee bars			
	(a) Web thickness upto 3 mm	5	5	IS 1173
	(b) Web thickness above 3 mm	2.5	2.5	
(v)	Bulb angles	2.5	2.5	IS 1252
(vi)	Bars in straight length			
	Upto and including 10 mm	7	7	IS 1732
	Over 10 mm and upto and including 16 mm	5	5	
	Over 16 mm	3	3	
(vii)	Bars in coils	Weight tolerance is not applicable		
(viii)	Flats			
	Upto 3 mm thickness	5	5	
	Over 3 mm thickness	5	3	
(ix)	Plates	5	2.5	IS 1730
(x)	Strips	10	10	IS 1730
	Consignment in straight length			
	(i) upto 5 tons	7	7	IS 1730
	(ii) Above 5 tons	5	5	
(xi)	Sheets			
	Over in mm	Thickness Upto and including in mm	Tolerance on calculated weight (Percent)	IS 1730
	-	1.25 mm	\pm 9	
	1.25 mm	1.60	\pm 8	
	1.6	4.00	\pm 7	

WELDING PROCESS

- (a) The work shall be positioned for downward welding wherever possible.
- (b) Arc length voltage and amperage shall be suited to the thickness of material, type of groove and other circumstances of the work. The welding current and electrode sizes for different types of joints shall be as per IS 9595.
- (c) The sequence of welding shall be such as will avoid undue distortion and minimize residual shrinkage stresses. Recommendation of IS 9595 shall be followed.

Process of Welding

The electrode manipulation during welding shall be such as to ensure that:

- (1) The parent metal is in a fused stage when the filler metal makes contact with it.
- (2) The weld metal does not overflow upon any unfused parent metal forming overlapping.
- (3) The parent metal is not under-cut along the weld toes.
- (4) The flowing metal floats, the slag, the oxides, and the gas bubbles to the surface behind the advancing pool. In case any of these requirements is unattainable by manipulation, the current shall be adjusted or the electrode size changed. Each time the arc is started the electrode shall be moved in such a way that the fusion of base metal at the starting point is assured. At the completion of a run the movement of electrode shall be slowed down to fill the arc crater. After every interruption of the arc except at completion of a run, the arc shall be restarted ahead of the previous deposit and then move back to fill the crater or such alternative technique shall be used as will ensure complete filling of the crater, or complete fusion between the new and old deposit and the base metal at the point of junction, and result in continuity of weld. Before welding operation is completed, all traces of slag shall be removed from the deposit, by chipping if necessary, and the deposit and the adjoining base metal shall be wire brushed and cleaned at all points. The requirements shall apply not only to successive layers, but also to successive beads, and to the overlapping area wherever a junction is made on starting a new electrode.
- (5) The welds shall be free from cracks, discontinuity in welding and other defects such as (i) under-size (ii) over-size, (iii) under-cutting and (iv) over-cutting in the case of fillet welds and defects (ii), (iii) & (iv) in the case of butt welds.

All defective welds which shall be considered harmful to the structural strength shall be cut out and rewelded. In case of welded butt joints in steel of thickness up to 50mm the weld joint shall be subjected to radiographic examination as described in IS 1182.

All welds shall be cleaned of slag and other deposits after completion. Till the work is inspected and approved painting shall not be done. The surface to be painted shall be cleaned of spatter, rust, loose scale, oil and dirt.

Reference IS Codes to be followed:

- 1. IS:277: Specification - Galvanized steel strips and sheet (Plain & Corrugated).
- 2. IS: 800 : Code of Practice for General Construction in Steel.
- 3. IS: 806 : Code of Practice for use of Steel tubes in general building construction
- 4. IS: 808: Dimensions for hot rolled steel beam, column, channel and angle sections
- 5. IS: 812: Glossary of Terms Relating to Welding and Curing of Metal.
- 6. IS: 813: Scheme of Symbol for Welding
- 7. IS: 814: Covered Electrodes for Manual Metal Arc Welding of Carbon and Carbon Manganese Steel.

8. IS: 816: Code of Practice for Use of Metal Arc Welding for General Construction in Mild steel
9. IS: 817: Code of Practice for Training and Testing of Metal Arc Welders.
10. IS: 818: Code of Practice for safety and health requirements in electric and gas welding and cutting operations.
11. IS: 822: Code of Practice for Inspection of Welds.
12. IS: 1161: Steel Tube for Structural purposes.
13. IS: 1278: Filler Rods and Wires for Gas Welding.
14. IS: 1363: Hexagonal Bolts, Screws and Nuts of Product Grade-C.
15. IS: 1364: Hexagonal Bolts, Screws and Nuts of Product Grade A & B.
16. IS: 1367: Technical Supply Conditions of Threaded Steel Fasteners.
17. IS: 1393: Code of Practice for Training and Testing of Oxy-acetylene Welders.
18. IS: 1477: Practice for Painting of Ferrous Metals in Buildings.
19. IS: 1608: Code of Practice for Testing of Metallic materials.
20. IS: 1730: Dimensions for steel plates, sheets, strips and flats for general engineering purpose
21. IS: 185Z: Rolling and cutting tolerances for hot rolled steel products.
22. IS:2016: Plain Washers
23. IS:2062: Steel for General Structural Purposes.
24. IS:2629: Recommended practice for Hot Dip Galvanizing on Iron & steel.
25. IS: 3502: Steel Chequered Plates.
26. IS: 3640: Hexagon fit bolts
27. IS: 3757: High strength structural bolts.
28. IS: 4000: High strength structural bolts in steel structures - Code of Practice. Ho Dip Zinc
29. IS: 4759: Ho Dip Zinc Coating on Structural Steel and other allied products.
30. IS: 4923: Specification - Hollow steel sections for structural use.
31. IS: 5369: General Requirements of Plain Washers and Lock Washers.
32. IS: 6419: Welding Rods and Bare Electrodes for Gas Shielded Arc Welding of Structural Steel.
33. IS: 6610: Heavy Washers for Steel Structures.
34. IS: 6623: High Strength Structural Nuts.
35. IS:6639: Specification for hexagon bolts for steel structures.
36. Specification for hardened and tempered washers for high strength structural bolts and nuts
37. IS 6745: Specification for hexagon bolts for steel structures.
38. IS: 7025: Safety Code for Erection of Structural Steel Works.
39. IS: 7215: Tolerances for Fabrication of Steel Structures.
40. IS: 7307: Approval Test for Welders Working to Welding to Approved Welding Procedures
41. IS: 8172 : Vertical Steel ladder.
42. IS 12778: Hot rolled parallel flange section for beams, columns, and bearing pile — dimension and section properties.
43. IS 12B43 : Tolerances for execution of Steel Structures.

SAND BLASTING

Providing and applying sand blasting as per ISO 8501/other relevant standards,/as directed by EIC on MS structural members, including all labour, materials, transportation etc. Complete.

5.81 PAINTING WORK

All synthetic paints and distempers used on the works shall be approved by the Nodal Officer or his nominee. Test certificates on, covering capacity dry film thickness and viscosity and drying time may be required.

5.82 PILE FOUNDATION

(e) General

This work shall consist of construction of bored cast-in-situ concrete piles shown on the drawings and conforming to the requirements of these specifications.

The piling works shall be done as per IS: 2911(part-1/sec-2) and MORTH specification except as modified herein.

(f) Method of Construction

The Contractor must furnish to the Employer, before commencing work, a detailed method of construction he intends to adopt for piling work together with the programme of construction.

(g) Pile Casing

Permanent mild steel liner shall be provided for all piles from cut off level up to the required level depends on the soil conditions and/or as approved by the Employer.

The minimum length should be provided 10m below the bed level.

(h) Boring

Boring shall generally be carried out by recommended procedure as set out in IS:2911 by either rotary or percussion equipment, grabbing equipment or by reverse or direct mud circulation method. While below sub-soil water level, precaution shall be taken so that no boiling of the bottom of the hole occurs due to the difference in hydrostatic head. The size of cutting tool shall not be less than the diameter of pile by more than 75 mm.

The specific gravity and composition of the fluid shall be such as to suit the requirements of the ground conditions and to maintain the fine materials from the boring in suspension.

Boring of any pile must be completed in one continuous operation without interruption. In case such interruptions are unavoidable, steps shall be taken to prevent the collapse of sides of the boreholes.

The Contractor shall be responsible in the event of bore collapse due to any reason, at the discretion of the Engineer in charge, re-boring or additional bores shall be carried out at no extra cost. If additional pile is driven and extra material is consumed due to strengthening of cap etc. such material shall be to Contractor's account.

The Contractor shall be responsible for the prompt removal from the Site of all spoil due to the boring and at places specified by the Engineer in charge. The cost of such disposal shall be deemed to have been included in the price.

Foundation elevation of each pile will be individually approved by the Employer on the basis of the Employer satisfying himself, from observations in supporting of the founding levels and all data including SPT tests at his disposal, of the soundness of the end bearing

stratum. For determining the founding strata, standard penetration tests shall be carried out in the borehole by “Nordmeyer Standard Penetrometer” as decided by the Engineer in charge. Before commencing a penetrometer test, the bottom of the borehole shall be cleaned.

(i) Drilling Fluid

Bentonite used in the works shall be of the best quality. Bentonite shall be mixed thoroughly with clean fresh water to make a suspension, which will maintain the stability of the pile excavation for the period, necessary to place concrete and complete construction. The frequency of testing the drilling fluid and the method and procedure of sampling shall be as directed by the Engineer in charge.

The bentonite used in the work shall satisfy the following requirements.

- The liquid limit of bentonite shall be more than 300% and less than 450%.
- Sand content of the bentonite powder shall not be greater than 450%.
- The swelling index shall be at least 2 times its dry volume.
- The PH value of the bentonite suspension shall be less than 11.5.
- Bentonite solution should be made by mixing it with fresh water using pump for Circulation. The density of the bentonite solutions should be about 1.12.
- The marsh viscosity when tested by marsh cone should be about 37 seconds.

(j) Cast In Situ Bored Piles

Construction of bored piles shall be carried out in accordance with the relevant sections of IS:2911 (Part I/sec 2).

Cast-in-situ concrete piles shall be constructed by driving or sinking non-structural tubular steel casings into the ground up to refusal, excavating all material from inside the casing, placing reinforcement and then filling the casings with concrete. The steel casings shall remain permanently in place and shall form part of the permanent works.

The Contractor shall submit a Construction Work Method Statement (CWMS) for all piling works in accordance with the general requirements as specified in this section.

In broad terms, the Contractor’s CWMS for piling works shall include but not be limited to the following items subject to the additional technical requirements for piling works as specified herein for approval of Engineer:

1. Description of overall piling works construction sequence;
2. Details of proposed materials for use in the piling works, including description, source and material test results or certificates demonstrating conformance of the materials to the requirements of these specifications;
3. Details of construction methods for the piling works including but not limited to details of;
 - Temporary works or bracing
 - Survey set out and control
 - Piling excavation and other plant, equipment and labour to be used
 - Any safety, environmental or other controls to be employed
4. Contingency plans or procedures to be employed in the event of unforeseen interruption of piling works due to adverse weather, obstructions, plant breakdown, or other malfunction;
 - Details of inspection, test methods and analysis or calculations to be undertaken

to ensure conformance of the constructed piles with the requirements of these specifications.

- Details of methods for rectification in the event of non-conformance of either materials of construction requirements of these specifications;
- Details of piling records to be kept including pro-forma piling records;

(k) Reinforcement for Piling Works

Reinforcement bars shall be Thermo-mechanically treated corrosion resistant steel of grade equivalent to Fe-500D, conforming to IS:1786.

Normal lap between reinforcement cages shall be as per I. S. Specifications. The main reinforcing steel shall project for a length sufficient to develop bond above the cut-off level of the pile. The clear concrete cover to main reinforcement shall be 75 mm and suitable spacer blocks shall be provided at intervals not exceeding 2 metres and wired to the main reinforcement.

(h) Control of Alignment

The pile shall be cast as accurately as possible to the vertical. Any pile deviating from its proper alignment to such an extent that the resulting eccentricity cannot be taken care of by strengthening the pile cap or pile ties shall, at the discretion of the Employer, be replaced or supplemented by additional piles at no extra cost.

(i) Defective Piles

Piles, which have been declared defective by the Employer, shall either be removed or left in position as per decision of the Employer. If left in place, the cost of any modifications required in the pile/pile caps shall be borne by the Contractor in addition to the cost of construction of any replacement piles. If removed, all costs related to this shall be borne by the Contractor.

(j) Finishing Pile Heads

The top of the piles shall be brought up above the finished level to permit all laitance and weak concrete to be removed and to ensure that it can be properly keyed into the cap. Any defective concrete in the head of the completed pile shall be cut away and made good with new concrete and bonded into the old.

(k) Pile Integrity Tests

Pile integrity test shall in general be carried out as per IS 14893 – 2001 except as modified herein or directed otherwise by the Consultants. The Contractor shall submit the proposed procedures and details of proposed testing equipment for Integrity testing to the Employer for approval at least 7 days before concreting.

Non-destructive integrity testing of bored piles, selected by the Engineer, shall be conducted using the low strain sonic diagnostic system consisting of hammer, low 'g' accelerometer with amplifier, pile integrity tester, portable computer system, graphics printer etc. all complete. The test shall be conducted by the qualified and experienced specialists in this field. Engineer's decision shall be final regarding approval of piles passing integrity test but of questionable workmanship.

(l) Load Test

Initial Vertical load tests shall be carried out on the specially constructed test piles. In addition to vertical load tests, the Contractor shall carry out horizontal load test on bored piles specially constructed for the purpose as per relevant IS specifications.

Maximum test loads shall be as determined by the Engineer according to I.S. Specifications considering the design loads.

Vertical Load Test

- The test shall be carried out by applying a series of loads on the test pile. The load shall be preferably applied by means of hydraulic jacks reacting against a symmetrically erected loaded platform which shall be preloaded to not less than 1.5 times the design load carrying capacity of the pile. The hydraulic jack shall be of adequate capacity and shall have a pressure gauge and remote-control pump.
- The Contractor shall arrange all the necessary equipment and kentledge with Platform at his own expense well in advance of the load test. Detailed proposal together with a sketch for the load test arrangement shall be furnished by the Contractor to the Engineer for the latter's checking and approval.
- The pile to be tested shall be chipped and dressed to a well-levelled surface. It is important that reinforcing bars of the pile do not project beyond the top surface of the level pile top.
- A round plate of suitable thickness and always greater than the diameter of the pile that is to be tested, shall be placed over a fine layer of sand spread over the top of the pile.
- A jack or two jacks, depending on the capacity of the jacks and the ultimate test load shall be inserted between the gap formed by the top of the plate resting on the pile and the lower flange of the main RSJs of the loaded platform. The jacks should preferably be connected and operated by one pump.
- The Contractor shall submit certificates showing the correctness of the calibration of the pressure gauges and the jacks before use. All jacks shall be fitted with locking devices.
- Another plate of suitable thickness shall be placed over the ram of the jack, which is later raised by operating the hydraulic pump so that the plate on the top of the ram butts against the bottom flange of the main RSJ's of the platform.
- Readings of settlement and rebound shall be recorded with the help of four dial gauges of 0.02 mm sensitivity and resting on diametrically opposite ends of the pile cap.
- The dial gauges shall be fixed to a datum bar whose ends rest upon non-movable supports. The supports should be at least $5 \times d$ away clear from the pile where "d" is the diameter of the pile. Readings on the dial gauges are to be observed immediately before and after application of loads and immediately before and after release of loads.
- The test load shall be applied in equal increments of about $1/5$ of the design load until the test load is reached.
- Each stage of loading and unloading shall be maintained until the rate of movement of The pile top is not more than 0.02 mm per hour. Unloading shall be done as under:
 1. Test load to design load
 2. Design load to 50% of the design load
 3. 50% to 25% of the design load
 4. 25% of the design loads to complete unloading
- The rebound reading for each decrement shall be noted. The final rebounding shall be recorded 24 hours after the entire load is released. The safe carrying capacity of the pile shall be estimated in accordance with IS:2911

Lateral Load Test

- Test pile shall be installed to the required depth and spacing as specified by the Engineer. A hydraulic jack of adequate capacity shall be inserted in between the to apply the lateral load At the approximate cut off level of the pile. Thrust pieces shall be inserted on either end of the jack to make up the gap. Lateral deflections shall be measured at the thrust level by means of dial gauges fixed to immovable supports.

- The loading shall be applied in one half tonne increments till the rate of deflection reduces to 0.02 mm/hour and a load deflection curve shall be plotted.
- The loading shall be continued till the deflection of the pile top reaches the estimated value or the estimated safe load whichever is earlier.
- When the full test load is applied it shall be kept on for 24 hours with observations made every hour and then released in 3 stages

Plant and Equipment

All temporary work, plant equipment, kentledge for applying the load and all necessary instruments for measurement of loads, deflection, etc. shall be provided by the Contractor. The equipment provided shall be capable of slowly applying and maintaining the required test loads to within an accuracy of 0.02 mm. The Contractor shall submit for approval of the Engineer his detailed proposal for carrying out the load test

Cost of Delay

The Contractor shall be deemed to have allowed in the construction programme the time required for testing of piles. No claim shall be entertained for any delay due to the testing programme.

Records of Load Tests

Records of load tests on piles shall be kept by the Contractor on the Site and a report shall be submitted to the Employer within 48 hours after the test has been completed. The records shall be kept on standard forms as submitted with the Contractors CWMS and agreed with the Employer. The records shall include graphs showing load and settlement versus time, plotted in the format shown in BS 8004, Figure 15(a) or equivalent IS.

The Contractor shall submit to the Engineer the following records of the tests

- Make and specifications of jack, pressure gauge and dial gauges
- Calibration of pressure and dial gauges
- Design load of Pile, description of location and identification marks of pile

The readings for settlement and rebound shall be entered in the following form:

Time	Load	Dial	Settlement	Dial	Settlement	Mean set	Remarks
1	2	3	4	5	6	7	8

(m) Dynamic Load Test

Dynamic load tests shall be carried out on the working piles.

Conducting High strain dynamic pile load test on working piles as per IS 2911 or ASTM ASTM D4945-17 for the load as directed by the Engineer-in-charge.

High strain dynamic load testing, analysis and reporting shall only be carried out by qualified and experienced personnel. The Contractor shall submit to the Employer for his approval, full details of the method and system he proposes to use.

(n) Piling Records

The Contractor shall prepare and maintain a piling record plan throughout the works. The piling record plan shall be updated progressively based on the pile completed and shall be submitted to the Engineer in charge on weekly basis throughout the piling works.

(o) Standard of Acceptance

The piles shall be approved as satisfactory only when the work has been executed in accordance with the Specification and to the satisfaction of the Engineer and the standards

stated below.

- The head of the pile shall be within 75 mm of the specified position
- The pile shall not be out of plumb by more than 2%
- The toe of the pile shall be at the approved bearing level in each case
- The total volume of concrete shall not be less than 95% and not more than 120% of the calculated volume. The calculated volume for this purpose shall be cross sectional area inside the casing multiplied by the length of the shaft.
- The concrete shall be of the design strength

Should a pile fail to meet the standard of approval specified above the Engineer may take one of the following decisions:

- Instruct the Contractor to carry out additional tests to ensure the soundness of pile.
- Accept the work and allow the Contractor to make suitable alternation in the construction of piles/pile cap/and beams. The cost of modification in the pile/pile beams shall be borne by the Contractor.
- Reject the pile/piles and instruct the Contractor to install additional piles at Contractor's expense.

The piles which fail to fulfill the standard of approval specified above shall be rejected and the Contractor, at his own cost, shall install additional piles as directed by the Engineer in charge.

5.83 PRECAST CONCRETE

The requirement of the clauses relating to concrete and reinforced concrete shall be observed in the case of precast concrete work so far as they are applicable, as well as the following requirements relating to the precast concrete work in particular.

The precast units shall be cast on, or their shutters supported from a suitably prepared level unyielding paved area.

The casting tolerances, unless otherwise ordered or directed, shall be within 3 mm of true dimensions. Lifting and stacking of precast units shall be undertaken without causing shock, vibration or undue stress to or in the units. Precast units shall not be lifted, transported or used in the works until they are sufficiently matured; the crushing test on the test cubes which are to be kept with the precast units will be used to assess the maturity of the units. Full and

accurate records are to be maintained of all precast work. Every unit shall have a reference number. Date of casting, date of removal from bed and date and position of placing shall be recorded together with corresponding test cube reference number.

5.84 STONE PITCHING WORKS

QUARRYING

Rocks to be obtained for the construction works shall be obtained from a quarry or quarries selected by the Contractor and approved by the Engineer. Notwithstanding that a quarry site has been approved by the Engineer all the rocks supplied from the quarry shall meet the requirements specified herein. The Engineer may at any time withdraw approval of a quarry if during work it is found that the quality or the yield in the quarry has deteriorated. The Contractor shall comply with such instruction of the Engineer without any extra charge. The Contractor shall provide, free of cost, core samples as may be required by the Engineer from time to time to determine the yield and quality of the rocks. Any of the rocks which fall short of the specified requirements will be liable for rejection and if so rejected by the Engineer, shall be removed by the Contractor at his own cost.

It shall be the Contractor's responsibility to take care of all environmental aspects, historic preservation and biological constraints in the quarry.

SURVEYS

Before starting of any work, a survey of the area of locations of proposed slope protection works shall be carried out by the Contractor in the presence of the Engineer.

Survey shall be carried out and levels to be recorded covering entire width of bund. The Contractor shall prepare a drawing showing the ground/bed levels and submit the same for approval by the Engineer.

As soon as the works are completed, a survey shall be carried out by the Contractor in the presence of the Engineer to verify whether the work has been carried out to the lines, levels and within the tolerances specified. The work shall not be accepted unless the Contractor has carried out all the additional corrective measures pointed out to him by the Engineer during the final survey. The Contractor shall prepare and submit drawings showing the finished levels of the rock bund for approval.

FORMATION OF ROCK BUND

The Contractor shall submit to the Employer for his approval full details of his proposed method of forming the rock bund. The Contractor shall not commence any permanent works until the Employer has approved in writing his detailed method for forming the rock bund.

The work method shall ensure that during the rock bund construction, the sequential placing of quarry run, shall proceed as closely as is practical.

All grades of material shall be placed to lines and levels as indicated on the approved Good for Construction Drawings.

Materials shall be placed as densely as possible so as to form a dense interlocking mass with a minimum of voids. The rock as per the sizes indicated in the drawings shall be deposited in place by dropping or dumping, unless approved otherwise by the Employer.

Quarry Spall (Providing embankment for approach road with quarry spall / granular material including cost of excavation, royalty, loading, unloading, transportation, spreading in layers compaction with road rollers 8 to 10 t capacity for remaining layers to achieve the OMC from the existing ground to required level, levelling, dressing side slopes, watering over the layers as desired by EIC etc.)

SCOPE :

This work shall consist of supplying, laying and compacting Quarry spall for embankment in accordance with the requirement of these specifications as mentioned in the items of Bill of quantities. Material shall be laid in one or more layer according to adjacent layers in line, grade and cross section shown on the drawing or as directed by Engineer In-Charge. First layer consider 400 mm thick compacted and then after each layer consolidated up to 200 mm compacted thicknesses.

Materials :

Materials to be used for the work shall be quarry spall materials having C.B.R. value not less than 20 , liquid limit and plasticity Index should be less than 25% and 6% respectively. Materials shall be free from organic or other deleterious construction.

CONSTRUCTION OPERATION :

Immediately prior to the laying of quarry spall for embankment shall be prepared by removing all vegetation and other extraneous matter, lightly sprinkled with water if necessary and rolled with one pass of 80-100 KN smooth wheeled roller.

SPREADING, COMPACTING, AND WATERING:

The quarry spall shall be spread on a prepared embankment from the stack along the side. In no case shall be the materials be dumped in heaps directly on the surface embankment..

The thickness of loose layers shall be so regulated that the maximum thickness of first layer after consolidation does not exceed 400mm.then after each compacted layer shall not exceed 200 mm.

Moisture content of the loose material shall be checked accordance with IS 2720(Part-II) and suitable adjusted by sprinkling additional water by trailer mounted water tank or other approved means so that at the time of compaction it is from 1 % above 2% below the optimum moisture content corresponding to IS 2720 (Part - VIII) while adding water, due allowance shall be made for evaporation losses after water has been added, the material shall be processed by mechanical or other approved means if so directed by the Engineer-in-charge until the layer is uniformly wet.

Immediately thereafter, rolling shall be started with Vibratory roller of 80-100 KN. Static Weight. The rolling shall be commenced at the edge and progress towards the centred longitudinally, except that on super - elevated portions it shall progress from the lower to the upper edge parallel to the centred line of pavement or on shoulders. During rolling, the grade and camber shall be checked and any high spots or depressions, which become apparent, corrected by removing or adding fresh materials. The speed of roller shall not exceed 5 Km. Per hour. The surface of any layer of materials on compaction shall be well closed; free from movement under compaction shall be closed free from movement under compaction equipment and from compaction planes, ridges, cracks, or loose materials. All loose segregated or other defective area shall be made from good to the full thickness or layer and re-completed.

MEASUREMENT FOR PAYMENT:

Quarry spall shall be measured as finished work in position of cubic meter. For ascertaining the compacted thickness, the required initial working levels shall be taken at interval of every 10 meters before spreading of quarry spall and final levels shall be taken after compaction and compaction of laid surface in accordance to the initial working levels. The average thickness of any area shall be the arithmetical mean of the different of levels before and after construction. Provided that the thickness of the finished work shall be limited to the specified thickness of the said course, the quantity shall be worked out by the average and area method.

The initial and final levels for embankment shall be taken separately in presence of authorized representative of the contractor.

5.85 HANDRAIL:

Handrail posts and handrails as well as other miscellaneous steel works shall be fabricated as specified herein and shall be erected/installed in lines and levels according to the Drawings and as directed by the Engineer. They shall be galvanized and painted with epoxy-based primer and finishing coats. Total paint thickness shall be 200 microns. Steelwork items occurring on deck top shall have finishing coats of colour approved by the Nodal Officer.

5.86 DRAIN HOLES:

The Contractor shall provide drain holes in the deck to drain surface water as shown in the drawings. Drain holes shall be by PVC pipes through the deck.

5.87 EARTHWORK:

This section of the specifications includes requirements for accomplishing all earthworks including filling for this Contract.

The contractor shall provide all necessary supervision, labour, materials, equipment and tools to perform excavation, grading, filling, embankments, roadways, ditches and all other items in both wet and dry conditions with all lifts and descents. Before beginning excavation or filling, the Engineer-in-charge shall be kept informed and approval if required shall be obtained.

5.88 EXCAVATION

The whole of the excavation of the works shall be carried out to the required widths, lengths and depths and within approved lines and levels. Any excavation beyond such limits or instructions shall be made good by filling with other approved materials to the required compaction, by the Contractor, at his own expense to the satisfaction of the Engineer-In-charge/ Engineer-In-charge's Representative.

The Contractor shall provide all shoring, strutting, shuttering or other approved support to the sides of the excavations as may be necessary to prevent any ground movement/sliding. The Contractor shall bear all responsibility connected with such shoring including dewatering notwithstanding the Engineer-In-charge's I Engineer-In-charge's Representative's approval. Cost of all such constructional requirements shall be deemed to have been included in the prices.

All debris and loose material on the slopes of cuttings shall be removed. No backfilling shall be allowed to obtain required slopes excepting that when boulders or soft materials are encountered in cut slopes, these shall be excavated to approved depth on instructions of the Employer and the resulting cavities filled with suitable material and thoroughly compacted in an approved manner.

After excavation, the sides of excavated area shall be trimmed and the area contoured to minimize erosion and ponding, allowing for natural drainage to take place. If trees were removed, new trees shall be planted, as directed by the Employer. The cost of planting new trees shall be deemed to be incidental to the work.

Methods, tools and equipment: Only such methods, tools and equipment as approved by the Employer shall be adopted/used in the work. If so desired by the Employer, the Contractor shall demonstrate the efficacy of the type of equipment to be used before the commencement of work. Mode of Measurement shall be referred to IS Standards.

5.89 EXCAVATION FOR STRUCTURES

Excavation for structures shall consist of the removal of material for the construction of foundations for buildings and other similar works, in accordance with the requirements of these Specifications and the lines and dimensions shown on the drawings or as indicated by the Employer. The work shall include construction of the necessary cribs and their subsequent removal; all necessary sheeting, shoring, bracing, draining and pumping; the removal of all grubs and other deleterious matter and obstructions, necessary for placing the foundations; trimming bottoms of excavations; backfilling and clearing up the site and the disposal of all surplus material.

5.90 BACKFILLING

Backfilling of masonry/concrete/hume pipe drain excavation shall be done with approved material after concrete/masonry/hume pipe is fully set and carried out in such a way as not to cause undue thrust on any part of the structure and/or not to cause differential settlement. All space between the drain walls and the side of the excavation shall be refilled to the original surface making due allowance for settlement, in layers generally not exceeding 150 mm

compacted thickness to the required density, using suitable compaction equipment such as mechanical tamper, rammer or plate compactor as directed by the Employer.

The Contractor shall undertake all reasonable precautions for the protection and preservation of any or all existing roadside trees, drains, sewers or other sub-surface drains, pipes, conduits and any other structures under or above ground, which may be affected by construction operations and which, in the opinion of the Employer, shall be continued in use without any change. Safety measures taken by the Contractor in this respect shall be got approved from the Employer. However, if any of these objects is damaged by reason of the Contractor's negligence, it shall be replaced or restored to the original condition at his expense. If the Contractor fails to do so, within the required time as directed by the Employer or if, in the opinion of the Employer, the actions initiated by the Contractor to replace/restore the damaged objects are not satisfactory, the Employer shall arrange the replacement/ restoration directly through any other agency at the risk and cost of the Contractor after issuing a prior notice to the effect.

5.91 DISPOSAL OF SURPLUS EXCAVATED MATERIAL

Excavation materials deemed suitable by the Engineer-in-charge for filling in other places shall be stockpiled in the vicinity of excavation sites with the approval of the Engineer-in-charge.

All the excavated materials shall be the property of the Employer. The material obtained from the excavation of roadway, shoulders, verges, drains, cross-drainage works etc., shall be used for filling up of (i) roadway embankment, (ii) the existing pits in the right-of-way and (iii) for landscaping of the road as directed by the Employer, including levelling and spreading with all lifts no extra payment shall be made for the same.

5.92 DEWATERING

The Contractor shall carry out all the works, in dry and workable condition and maintain the same in dry condition till the final handing over of works at no extra cost to the Engineer-in-charge. For this the Contractor shall make all the necessary provisions of dewatering, wherever necessary, to the entire satisfaction of the Engineer-in-charge.

If water is met with in the excavations due to springs, seepage, rain or other causes, it shall be removed by suitable diversions, pumping or bailing out and the excavation kept dry whenever so required or directed by the Employer. Care shall be taken to discharge the drained water into suitable outlets as not to cause damage to the works, crops or any other property. Due to any negligence on the part of the Contractor, if any such damage is caused, it shall be the sole responsibility of the Contractor to repair/restore to the original condition at his own cost or compensate for the damage. Dewatering will not be paid extra. It will be included in the contract price.

5.93 ANTI TERMITE TREATMENT

The treatment shall be carried out by an approved specialist VENDOR. The chemicals used shall conform to IS:8944.

5.94 TREATMENT TO SOIL UNDER SLABS AT PLINTH & GROUND FLOOR

After earth filling and before the dry rubble or core packing, the centre surface of the filled earth will be treated with a chemical emulsion recommended by the specialist sub-contractor at the rate specified by the manufacturer. Light rodding shall be done to facilitate spraying and absorption.

5.95 TREATMENT TO SOIL ALONG THE EXTERNAL WALL PERIMETER

After levelling and before flagging or plinth protection is laid, soil along the external wall perimeter of the building upto a depth of 30 cm shall be treated at the rate of 4.5 litres emulsion per linear meter of plinth walls. If necessary, rodding at 30 cm intervals shall be carried out to facilitate spraying and absorption.

5.96 GUARANTEE

The specialist agency shall provide a guarantee that buildings shall be free from termite infestation for a period of 5 years from the expiry of defects liability period.

5.97 BRICK MASONRY

Bricks for masonry works shall conform to IS:1077-Specification for common burnt clay building bricks and shall be of class 5.0 (with minimum compressive strength of 5.0N/mm²). Specific requirement for any other class of bricks shall be as shown in drawings or as described in the Contract for a particular site or type of work. Physical requirement, quality, dimensions, tolerances etc. of common burnt clay building bricks shall conform to the requirements of IS:1077.

Bricks shall be hand-moulded or machine moulded and shall be made from suitable soils. The bricks shall have smooth rectangular faces with sharp corners and shall be well burnt, sound, hard, tough and uniform in colour. These shall be free from cracks, chips, flaws, stone or humps of any kind.

5.98 LAYING

ONE OR MORE BRICK THICKNESS: Brick work (one or more brick thickness) shall be laid in English Bond unless otherwise specified. Half or cut bricks shall not be used except when needed to complete the bond. In no case the defective bricks shall be used.

A layer of average thickness of 10mm of cement mortar shall be spread on full width over a suitable length of lower course or the concrete surface. In order to check and achieve uniformity in masonry, the thickness of bed joints shall be such that four courses and three joints taken consecutively shall measure equal to four times the actual thickness of the brick plus 30mm. Each brick with frog upward, shall be properly bedded and set in position by gently tapping with handle of trowel or wooden mallet.

All brick courses shall be taken up truly plumb; if battered, the batter is to be truly maintained. All courses shall be laid truly horizontal and vertical joints shall be truly vertical. The level and verticality of work in walls shall be checked up at every 1 m interval.

The masonry walls of structures shall be carried up progressively, the brick work shall be raked back according to bond (and not left toothed) at an angle not more than 45 degrees but raking back shall not start within 60 cm of a corner. In all cases returns, buttresses, counter forts, pillars etc. shall be built up carefully course by course, and properly bonded with the main walls. The brick work shall not be raised more than fourteen (14) courses per day.

HALF BRICK THICKNESS: For brick walls of half brick thickness, all courses shall be laid with stretchers. Wall shall be reinforced with 2 nos. - 6mm diameter mild steel reinforcement bars, placed at every fourth course. The reinforcement bars, shall be straightened and thoroughly cleaned. Half the mortar thickness for the bedding joint shall be laid first and mild steel reinforcement, one on each face of the wall, shall be embedded, keeping a side cover of 12mm

mortar. Subsequently, the other half of the mortar thickness shall be laid over the reinforcement covering it fully.

Jointing: Joints shall be restricted to a width of 10mm with brickwork of any classification. All bed joints shall be normal to the pressure upon them i.e. horizontal in vertical walls, radial in circular brick masonry and at right angles to the face in the battered retaining walls. The vertical joints in alternate courses shall come directly one over the other and shall be truly vertical.

Curing: Green work shall be protected from rain or any other running water or accumulated water from any source, by suitable means. Masonry work, as it progresses, shall be kept thoroughly wet by sprinkling water at regular intervals, on all faces. Curing shall be done after 24 hours of completion of day's work and shall be done for atleast 10 days after completion

5.99 FLOORING AND DADOING WORKS:

This specification covers the general requirements for flooring and dadoing of various types of finishes including supplying, installation, finishing, curing, testing, protecting, maintaining until handing over.

5.100 PREPARATION OF BASE SURFACE

The surface shall be thoroughly cleaned and soaked with water, atleast for twelve hours and the surplus water shall be removed by mopping immediately before the topping is laid in position.

The prepared surface has to be approved by the Engineer before commencing the finishing work.

5.101 CERAMIC TILES

Glazed ceramic tiles shall be highly pressed, single fired, red body, top glazed white or coloured, plain or with designs.

The group and quality of tiles specified in the bill of quantities and as shown on the drawings shall be used as directed by the Engineer

5.102 FLOOR TILES

These tiles should have high strength, good resistance to wear and tear, low water absorption and sufficient antiskid properties and shall conform to IS : 13755 and BLLA EN177 (European Standard). Based on the properties of the glaze and their hardness, floor tiles are categorized abrasion resistance wise as Group – II to V / V+. According to the intensity of foot traffic, the tile group shall be selected and used.

5.103 WALL TILES

Ceramic wall tiles shall be single fast fired tiles having medium water absorption and high strength characteristics. These tiles should have high glaze and better adhesion to wall and shall conform to IS : 13753 and EN 159 standards. Wall tiles shall be glossy / semi glossy / matt glaze finish, white or coloured, plain or printed, special printed and premium printed. These tiles shall be sound, uniform colour, true to shape with true and straight edges and non-fading.

5.104 VITRIFIED TILES

These tiles are of different shades having monolithic body which is pressed in very high

tonnage press and fired to high temperature and shall conform to IS : 4457 and EN 98 standards. The tiles shall be sound, non- absorbing flat and true to shape with straight edges. The tiles shall be with smooth surface or textured anti-skid finish surface. The tiles should be free from any warping, deformation any chipping and any scratches. The tiles shall be in absolute level. The under side of tiles shall have ribs or indentations for better anchorage with the base mortar / adhesive as specified.

5.105 LAYING AND FINISHING OF FLOOR TILES

The under bed for flooring shall be of 20 mm average thick cement mortar 1:4 (1 part cement and 4 parts sand) or as specified in item specification. The bedding shall be laid evenly over the surface, tamped and corrected to desired levels and allowed to harden enough to offer a fairly rigid cushion to tiles. Before fixing the tiles, the bed mortar shall be roughened by scratching diagonal lines at closed intervals and grey cement slurry of honey like consistency shall be applied over the bedding. Tiles shall be well soaked in water washed clean and fixed in cement grout one after the other, each tile being gently tapped in its position with a wooden mallet till it is properly bedded and in level with the adjoining tiles.

After the tiles have been laid, surplus cement grout shall be cleaned off. The joints shall be cleaned off the grey cement grout with a wire brush or trowel to a depth of 5 mm and all dust and loose mortar removed. Joints shall then be flush pointed with grout of white cement mixed with “Roff Rainbow Tile Mate” or approved equivalent, to match the colour of tiles as per Manufacturer’s specification. The floor shall then be kept wet for 7 days. After curing, the surface shall be washed with mild hydrochloric acid and clean water. The finished floor shall not sound hollow when tapped with a wooden mallet.

5.106 LAYING AND FINISHING OF WALL TILES

A 12 mm thick plaster of cement mortar 1:3 mix or as specified in item shall be applied and allowed to harden. The plaster shall be roughened with wire brushes or by scratching diagonal at closed intervals and cured properly. The tiles should be washed clean and a coat of cement slurry applied liberally at the back of tiles and set in the bedding mortar and for pointing the tiles. For maintaining uniform gap and alignment plastic spacer should be used. Chemical adhesive of approved make shall be used for setting the tiles in the bedding mortar.

Skirting / dado shall rest on the top of the flooring where full size tiles cannot be fixed these shall be cut (swan) to the required size and height as specified and their edges rubbed smooth.

The joints shall be cleaned off with wire / coir brush or trowel and all dust and loose mortar removed. Joints than shall be flush pointed with grout of white cement mixed with “Roff Rainbow Tile Mate” or approved equivalent to match the colour of tiles as per manufacturer specification. The work shall then be kept wet for 7 days.

5.107 GRANITE FLOORING

The slabs must be of uniform thickness as specified the variation in the thickness not exceeding 2 mm and must be from the same source. They shall be of uniform texture and colour free of any veins and streaks. All the edge shall be chiseled true to line, square and shape. The brushes in the joints are not more than specified thickness.

5.108 PLASTERING AND POINTING:

This section shall cover all plastering (internal/external) and allied works on all types of masonry and concrete surfaces and pointing works.

5.109 PREPARATION OF SURFACE

The surface shall be cleaned off all dust, loose mortar droppings, traces of algae, efflorescence and other foreign matter by water or by brushing. Smooth surfaces shall be roughened by wire brushing or hacking for non-hard and hard surfaces respectively. Projections on surfaces shall be trimmed wherever necessary to get even surfaces. In case of brick/stone masonry, raking of joints shall be carried out wherever necessary. The masonry shall be allowed to dry out for sufficient period before carrying out the plasterwork. The masonry shall not be soaked but only damped evenly thereafter before applying the plaster.

Galvanised chicken mesh (24 gauge, 12 mm size) shall be provided at junctions of brick masonry and concrete members, to be plastered and other locations 150 mm on either sides of the junction in double fold or as called for, properly stretched and nailed, ensuring equal thickness of plaster on both sides of the mesh. The rate includes in the plaster works.

For ceiling plaster, the concrete surface shall be pock marked with a pointed tool to ensure a proper key for the plaster.

The wall shall be dampened evenly and not soaked before application of plaster. If the surface becomes dry in spots, such areas shall be moistened again.

5.110 APPLICATION OF PLASTER

In all plaster work, mortar shall be firmly applied with some what more than the required thickness and spread evenly well pressed in to the joint and on the surface and rubbed, levelled and smoothened with straight edge, wooden float and trowel to the required thickness and finished as approved by the Engineer to give a smooth true and even surface. Plaster when more than 15 mm thick, shall be applied in two coats a base coat followed by the finishing coat. Thickness of the base coat shall be just sufficient to fill up all unevenness in the surface, no single coat, however shall exceed 12 mm in thickness. The lower coat shall be thicker than the upper coat. The overall thickness of the coats shall not be less than the minimum thickness

shown on the drawings. The undercoat shall be allowed to dry and shrink before applying the second coat of plaster. After a suitable time interval (Preferably not more than 5 days) the second coat may be applied. The under coat shall be scratched or roughened before it is fully hardened to form a mechanical key.

The finished wall surface shall be true to plumb, and the Contractor shall, without any extra cost, make up any irregularity in the masonry and concrete work with plaster. All vertical edges of brick pillars door jambs etc. shall be chamfered or rounded off as directed by the Engineer. All corners must be finished to their true angles or rounded. Any plastering that is damaged shall be repaired and left in good condition at the completion of the job.

5.111 FINISHES

The interior plaster shall generally be finished to a smooth surface. Wherever punning is indicated, the interior plaster shall be finished rough. The exterior surface, shall generally be finished with a wooden float. Wherever any +/*-+special treatment to the plastered surface is indicated, the work shall be done exactly as shown on the drawings, to the entire satisfaction of the Engineer regarding the texture, colour and finish.

Ceiling Plaster – Plaster to ceilings, soffits or stairs flight slabs and similar locations, where called for, shall be as specified in the Schedule of Quantities.

5.112 POINTING

The materials, preparation of mortar etc. shall be same as specified for cement plaster works. The mix proportion shall not be leaner than 1:3, unless otherwise specified. For all exposed brickwork or stone masonry work, self supporting double scaffolding, having two sets of vertical supports shall be provided so as to avoid openings in the wall.

5.113 PREPARATION OF SURFACE

The joints shall be raked out properly to such a depth that the minimum depth of the new mortar measured from either the sunk surface of the finished pointing or from the edge of the brick shall not be less than 10 mm. Dust and loose mortar shall be brushed out. Efflorescence, if any shall be removed by brushing and scraping. The surface shall then be thoroughly washed with water, cleaned and kept wet before commencement of pointing.

5.114 APPLICATION OF MORTAR AND FINISHING

The mortar shall be pressed into the raked out joints, with a pointing trowel, flush, sunk or raked, according to the type of pointing required. The mortar shall not spread over the corner, edges or surface of the masonry. The pointing shall then be finished with the proper tool according to the type of pointing required.

5.115 CURING

The pointing shall be kept wet for 7 days.

5.116 PAINTING:

This specification covers the general requirements for painting, white washing, etc. of both interior and exterior surfaces of masonry, concrete, plaster and all carpentry works, structural and miscellaneous steel works. This also includes furnishing of all materials, labour, scaffolding, tools and appliances etc.

5.117 SYNTHETIC ENAMEL PAINT

Shall be made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give a smooth, hard, durable and glossy finish to all exterior and interior surfaces. White and pastel shades shall resist yellowing and darkening with ageing, The paint shall conform to IS:2932 and IS:2933.

5.118 ACRYLIC EMULSION PAINT

Shall be water based acrylic copolymer emulsion with rutile titanium dioxide and other selected pigment and fungicide. It shall exhibit excellent adhesion to plaster and cement surface and shall resist deterioration by alkali salts. The paint film shall allow the moisture in wall to escape without pelling or blistering the paint. After it is dried, the paint should be able to withstand washing with mild soap and water without any deterioration in colour or without showing flaking, blistering or peeling.

5.119 PREPARATION OF SURFACE

Wood Work: Protruding timber fibre shall be removed and all holes shall be filled with teakwood batten. the nail marks shall be covered with putty. The work shall then be sanded first with G/80 sand paper followed by G/120 or G/150 sand paper. Sanding should be taken up only when it can be followed immediately by painting.

Steel work: The surface shall be thoroughly cleaned sand prepared and / or rubbed with emery cloth if necessary to remove grease, mortar or any other foreign materials. In case of rusted surface, it shall be first cleaned with steel wire brushes till the corroded crust is removed. The

cleaned surface shall be shiny and free from brush marks, patches, blisters and other irregularities. The surface thus finished shall be got approved before painting.

Masonry, concrete and plastered surface: Concrete / masonry surface and cement plastered surfaces shall be thoroughly cleaned of mortar droppings and other stickings. All loose scales and flakes shall be removed by rubbing with hessian cloth or sand papering. All holes shall be filled and the surface rubbed smooth to get evenness of the existing surface. The surface shall be free from all oil, grease, efflorescence, mildew, loose paint or other foreign and loose materials. Masonry cracks shall be cleaned out and patch filled with mortar similar to the original surface and uniformly textured. Where this type of resurfacing may lead to the finishing paint being different in shade from the original surfaces, the resurfaced area shall be treated with a minimum of one coat of cement primer and should be continued to the surrounding area for a distance of at least 100 mm.

5.120 APPLICATION

Before the commencement of the work the Contractor shall provide sample panels of painting at his own cost for the approval of the Engineer to enable him to keep an accurate check on the materials supplied and final shade to be painted. It is however the express responsibility of the Contractor to provide any deviations and defects shall have to be rectified by the Contractor at his own cost.

The method of application shall be as recommended by the manufacturer. In case of selection of a special shade and colour (not available in standard shades) the Contractor shall prepare test panels in different shades of minimum size 1 metre square as instructed by the Engineer and obtain his approval prior to applications of the finishing paints.

All priming undercoats for painting shall be applied by brush only. Roller and spray equipment, etc., shall not be used. The cleaned surface shall be dusted and a primer shall be applied.

One shop coat of red oxide or zinc chromate primer or as specified shall be given to all iron surfaces. Painting work on steel and iron surface shall conform to IS : 1477 (Part I and II).

All primer coats shall be compatible to the material of the surface to be finished as well as to the finishing coat to be applied.

5.121 OIL/ENAMEL/ALUMINIUM PAINT

A filler putty coating has to be given after primer coat in the case of wooden surfaces. The putty shall be made from pure whiting mixed to the proper consistency with new linseed oil. A little white lead being mixed to help hardening of putty. On no account putty is to be used before primary coat. Each coat shall be allowed to dry out thoroughly and then lightly rubbed down with sand paper and cleaned of dust before the next coat is applied. Number of coats shall be as specified in the item and if however the finish of the surface is not uniform additional coats as required shall be applied to get good and uniform finish at no extra cost.

5.122 WHITE WASHING WALLS AND CEILINGS

The number of coats shall be applied by using flat brushes or spray pumps, on surface prepared. The wash shall be applied with brush with alternate coats of horizontals and verticals. When a coat is being given it shall be ensured that the previous one has dried up completely. Two or more coats of wash shall be applied to give uniform finished surface without any patches or cracks and brush marks. It should not come off when rubbed hard with hand. One coat of white wash shall consist of one stroke from top downwards, another from

bottom upward over the first stroke, and another from left to right before the previous one dries up. The final coat shall be perfectly uniform in appearance and free from brush marks.

5.123 ACRYLIC EMULSION PAINT

Number of coats shall be as specified in the item and if however the finish of the surface is not uniform additional coats as required shall be applied to get good and uniform finish at no extra cost. After completion no hair marks from the brush or clogging of paint puddles in the corners of panel angles of mouldings shall be left on the work.

5.124 WATERPROOFING TREATMENT: SURFACE PREPARATION

The surface to receive the waterproofing shall be cleaned of all dust, dirt, loose material, debris, mortar droppings, laitance, oil, grease or any other form of foreign matter which might affect adhesion and left in a saturated, surface dried condition and approval of Engineer taken before starting the work. The surface to be treated in underground structures shall be kept dry by continuous pumping of water.

The surface preparation shall be done as per specification and instructions of the manufacturer.

5.125 STAGES OF TREATMENT

Treatment on PCC levelling course: Providing and laying integral cement based treatment for water proofing on top of PCC laid for Raft & beam, etc. in the following order and consisting of following operations. :

- a) Providing plastering over the PCC with CM 1 : 3 - 20 mm thick admixed with integral Water proofer conforming IS 2645 @ 2 % by weight of cement as per methodology
- b) Application 2 coats of TAPECRETE or approved equivalent Acrylic Polymer Modified Cementitious Coating over plastered surface
- c) Providing plastering over treated area with CM 1 : 3 - 20 mm thick admixed with Integral Water proofer conforming IS 2645 @ 2 % by weight of cement as per methodology

The surface preparation shall be done as per specification and instructions of the manufacturer.

Chemical injection treatment to base slab and side walls from inner sides: The treatment shall be as per manufacturers specification adopting following general operation details :

Providing and Fixing 18 mm dia GI nozzles (the nozzle shall be embedded about half the depth of the member to be grouted) in grid pattern at a spacing not more than 1.0 metre c/c while casting the raft slab and along construction joints at a spacing not more than 1.0 metre c/c along the construction joints. Nozzles can also be post fixed by drilling holes using drill machine and to be fixed with cement putty admixed with quick setting integral Waterproofing compound CICO NO.3 or approved equivalent in the ratio 1:1 by weight. The Caps shall be fixed in the mouth of the nozzles to avoid chocking of cement slurry etc, while concreting or Post fixing the Nozzle. (Nothing extra shall be paid for post fixing)

Applying injection grouting through the nozzles grouting pumps with a minimum pressure of 2 kg/sqcm with cement slurry admixed with CICO Non shrink Polymeric Water Proof Grouting Compound or approved equivalent at the rate of 2% by weight of cement. Grouting operations to be taken up after the raft / slab concrete reached the full strength, i.e. 28 days after casting of concrete.:

Treatment to side walls from exterior surface: Making 'V' grooves at the construction joints

of size 20 x 20 mm and clean the surface with wire brush.

Application of two coats of TAPECRETE Acrylic Polymer Cementitious Coating Product: TAPECRETE - of CICO over well prepared surface as per methodology

Providing plastering over the treated area with CM 1 : 3 - 20 mm thick admixed with CICO No. 1 Integral Water proofer conforming IS 2645 @ 2 % by weight of cement as per methodology

Treatment to Roof Slab: Prepare the surface free from debris, dirt, grease, oil, making "V" Groove over construction joint wherever necessary and sealing the construction joint with Quick Setting Material admixed with Cement

Application of two coats of : TAPECRETE of CICO over well prepared surface as per methodology

Providing plastering over the treated area with CM 1 : 3 - 20 mm thick admixed with CICO No. 1 Integral Water proofer conforming IS 2645 @ 2 % by weight of cement as per methodology

Laying screed concrete 1:2:4 mix using 20mm and down size Course graded Aggregate to an average minimum thickness of 125 mm (i.e. minimum 75 mm thickness at lower end/near rainwater outlet and 175 mm thickness at higher end/at the ridge). An additional layer of Screed concrete shall be laid over the existing concrete surface

Leakage test shall be conducted by storing water on the terrace for about 25 mm depth continuously for a period of 7 days.

5.126 UPVC DOORS AND WINDOWS :

uPVC doors and window frames shall be a complete system manufactured from acrylic modified high quality impact resistant white (or coloured as specified) unplasticised polyvinyl chloride, reinforced, rigid multi-chamber extrusion by a suitably qualified fabricator. Door and window fabrication shall meet basic performance requirements recommended for climatic and atmospheric conditions of site and in strict accordance with the system supplier's recommendations.

Door window type, size and style shall meet requirements specified in relevant door/window schedules.

Door, window design shall include factory finish glazing as required, purpose made threshold/subcills, trickle ventilators and security/locking devices as recommended by manufacturer

5.127 UPVC WINDOW SYSTEM :

Specifications for the works that need to be executed and the materials to be used in the placement and installation of uPVC windows and associated products/fitting

Windows: All window frames and sashes shall be manufactured from white UPVC profile, which shall have 3 hollow chambers from front to back. The outer profile shall have a front to back depth of 65/118 mm for Profiles with load bearing capacity up to 3000 Pa and 56/102 mm for Profiles with load bearing, capacity up to 1500 Pa.

All sections of the frame and sash shall be reinforced in accordance with the system supplier's recommendations using galvanized mild steel in a single continuous length.

Fabrication of Window: The dimensional tolerances on the finished outer frame height and width shall be ± 3 mm. Frame assemblies shall be such that they can be installed square within a maximum difference in the diagonals of 4mm.

There is to be no mechanical joining of the profile, below a span of 3000 mm.

The finished product shall be free from all sharp edges, burrs and the like that may be

hazardous to the user. The window units shall be designed so that the route of drainage is prevented from passing through the reinforcement chamber.

Installation of Frame: The fixings shall be no less than 150 mm from corners or transoms/mullions and at no more than 600mm centers.

When the frame is securely fixed in position then fit glass and glazing beads. Allow for any necessary glazing blocks and glass lock devices

Guarantee: Manufacturer to offer a warranty on the window profile used in the manufacture of UPUC window systems for a period of 10 years from the date of installation. The Warranty has to cover all abnormal defects in workmanship/quality. The guarantee has to be underwritten by a Company nominated Executive

5.128 ROLLING SHUTTER:

Rolling shutters shall be of best quality conforming to IS 6248 - 1979 and obtained from approved make. These shall include necessary locking arrangement and handles, fixing bolts, safety devices, anchoring rods etc. These shall be suitable for fixing in position as specified i.e. outside or below lintel or between jambs of the opening. The door shall be push and pull type and also operated with chain crank as required. Electrically operated rolling shutters shall be used wherever specified.

5.129 GALVANISING

All M.S. materials including lath sections, clips, guides, lock plate, guide channel, bracket plate, suspension shaft hood cover & other components shall be hot dip galvanised with a zinc coating containing not less than 97.5 percent pure zinc. The weight of the zinc coating shall be not less than 750 mm/m² both sides and the coating shall be free from flaking or peeling conforming to IS: 1477 - 1977 (Part I & II).

5.130 SHUTTERS

The shutters shall consist of M.S. lath sections conforming to IS 513-1986, 1.25 mm thick and 75 mm wide unless otherwise specified. The laths shall be machine rolled and straightened with an effective bridge depth of not less than 16 mm and shall be interlocked together throughout their entire length and joined together at the end with end locks by means of cast iron or galvanised mild steel clips conforming to IS 2108-1977 riveted at either end which shall prevent lateral movement of the individual lath sections. These shall be mounted on specifically designed pipe shaft. Each lath section shall be a continuous single strip piece without any joint.

5.131 SPRINGS

The springs shall be, preferably of coiled type. The spring shall be manufactured from high tensile spring steel wire conforming to grade 2 of IS 4454-1981 or strip of adequate strength to balance the shutters in all positions. The spring pipe shaft etc. shall be supported on strong mild steel brackets.

5.132 GUIDE CHANNEL

The guide channels shall be of mild steel deep channel section and of rolled, pressed or built-up construction. The thickness of the sheet used shall not be less than 3.15 mm. The minimum depth of guide channels shall be 60 mm for clear width of shutters up to 3.5 m and 75 mm for 3.5 m and above guide.

The gap between the two legs of the guide channel shall be sufficient to allow free movement of the curtain and at the same time close enough to prevent rattling of the curtain due to wind.

Each guide channel shall be provided with a minimum of three fixing cleats or supports for

attachment to the walls or columns by means of heavy duty bolts or screws.

The guide channels shall be attached to jambs, in plumb either in the overlapping or projecting torsion or embedded in grooves, depending on method of fixing to the approval of the Engineer.

5.133 FIXING

Brackets shall be fixed on the lintel or under the lintel as shown with metal fasteners, screws, bolts, etc. The shaft along with the spring shall then be fixed to the brackets.

The shutters shall be laid on the ground and the side guide channels shall be bound with it with ropes etc. The shutter shall then be placed in position and top fixed with pipe shaft with bolts and nuts. The side guide channels and the cover frame shall then be fixed to the walls through the plate welded to the guides.

Fixing shall be done accurately in workman-like manner so that the operation of the shutter is easy and smooth.

5.134 HANDRAIL POSTS AND HANDRAILS :

Handrail posts and handrailing shall be fabricated from medium class stainless Steel Tubes conforming to ASTM A312, ASME SA312 (SS 316 grade).

5.135 SANITARY AND PLUMBING WORKS :

The work comprises supply, installation, commissioning and testing of sewerage and drainage, sanitary fixtures and fittings within including water supply the building and up to 1.0 m outside the building wall. The work includes supply of all materials as per specifications and drawings, laying, fitting, fixing, installation and commissioning of the same.

All the water supply and sanitary works shall be carried out by the licensed plumbers approved by the Employer and skilled workmen, experienced in the trade.

All works shall be completely concealed either within shafts or chases or in fills and dropped ceilings unless specifically shown in drawings or required otherwise.

All work shall be adequately protected, to the satisfaction of the Employer, so that the whole work is free from damage throughout the period of construction up to the time of handing over.

No work shall be covered without approval of the Employer.

The Contractor shall submit as directed by the Employer samples, manufacturer's drawings, equipment characteristics and capability data etc. of all equipment, accessories, devices etc. that he proposes to use in the installation, to the Employer for approval.

All sanitary ware and fittings shall conform to IS standards. The Contractor shall submit samples of all fittings and fixtures proposed to be used to the Employer for his approval. The approved samples shall remain with the Employer till the completion of the work.

All workmanship shall conform to Indian Standard Codes of Practice. The fixing and finishing shall be neat, true to level and plumb. Manufacturer's instructions shall be followed closely regarding installation and commissioning.

All fixtures shall be protected throughout the progress of the work from damage. Special care shall be taken to prevent damage and scratching of fittings. Tool marks on exposed fixtures shall not be accepted. Protective paper on fixtures shall be removed with hot water only at the final completion of work.

All the water supply, drainage and sanitary works shall be carried out strictly as per specifications, ISI codes and National Building Code with amendments up to date.

5.136 WATER SUPPLY :

The work comprises supply, installation, commissioning and testing of sewerage and drainage, sanitary fixtures and fittings within including water supply the building and up to 1.0 m outside the building wall. The work includes supply of all materials as per specifications and drawings, laying, fitting, fixing, installation and commissioning of the same.

5.137 G.I. PIPES:

All pipes for water supply inside the building shall be genuine galvanised steel tubes conforming to IS:1239 Part I (heavy grade 'C' class pipe).

The GI pipes shall be of approved make as per the list of approved makes.

5.138 G.I. FITTINGS:

All fittings shall be malleable cast iron fittings as per IS:1879 (or as revised). All fittings shall have manufacturer's trademark stamped on it. Fittings in G.I. pipelines shall include elbows, tees, bends, reducers, nipples, union, bushes, G.I. Clamps of approved design, G.I. flanges with 3 mm rubber insertion, nuts, bolts, washers, etc. All fittings shall be tested at manufacturer's works. Contractors may be required to produce certificate to this effect from the manufacture.

5.139 LAYING AND JOINTING OF G.I PIPES (EXTERNAL):

a) Trenches

At the joints the trench width shall be widened where necessary. The work of excavation and refilling shall be done true to line and gradient in accordance with general specifications earthwork in trenches.

b) Cutting and Threading

Where the pipes have to be cut or rethreaded, the ends shall be carefully filed out so that no obstruction to bore is offered. The end of the pipes shall then be carefully threaded conforming to the requirements of IS:554-1964 with pipe dies and tapes in such a manner as will not result in slackness of joints when the two pieces screwed together. The screw threads of pipes and fittings shall protected from damage until they are fitted.

c) Jointing

The pipes shall be cleaned and cleared of all foreign matter before being laid. In jointing the pipes, the inside of the socket and the screwed end of the pipes shall be oiled and rubbed over with white lead and a few turns of spun yarn wrapped around the screwed end of the pipes. The end shall then be screwed in the socket, tee etc. with the pipe wrench. Care shall be taken that all pipes and fittings are properly jointed so as to make the joints completely water tight and pipes are kept at all times free from dust and dirt during fixing.

d) Pipe coating & Wrapping

All underground pipes shall be protected by pipecoat primer and pipecoat wrapping. The pipe coat primer shall have a density of 0.92 gm/cc and drying time of 24 hours at RH 70% and temp 30 deg. C. Viscosity shall be 1000 – 2000 cps.

The pipe coat shall be a puncture resistant non-woven polyester mat 4 mm thick of high mechanical strength. The mat shall be in 7 layers. The layers shall be so arranged as to also give extra protection to high molecular high density polythene core which is the main permeable agent in the system.

Pipecoat primer shall be applied on the pipe in a uniform coat leaving no drop runs.

e) Testing of Joints

After laying and jointing, the pipes and fittings shall be inspected under working condition of pressure and flow. Any joint found leaking shall be redone and all leaking pipes removed

and replaced without extra cost.

The pipes and fittings after they are laid shall be tested to hydraulic pressure of 1.5 times the working pressure. The pipes shall be slowly and carefully charged with water allowing all air to escape and avoiding all shock or water hammer. The draw of traps and stop cocks shall then be closed and specified hydraulic pressure shall be applied gradually.

f) Trench filling

The pipes shall be laid on a layer of 7.5 cm sand and filled upto 15 cm above the pipes. The remaining portion of the trench shall then be filled with excavated earth as specified and directed and the surplus earth shall be disposed off as directed by the Employer.

5.140 LAYING AND JOINTING OF G.I PIPES (INTERNAL):

g) Fixing of GI Pipes

All exposed GI pipes shall be fixed by means of standard pattern holder bat clamps, keeping pipes 1.5 cm clear of the wall. If the pipes are fixed in chases they shall be fixed in position by iron hooks.

5.141 SANITARY FIXTURES AND FITTINGS:

All sanitary fittings are glazed earthen ware shall be 'Hindustan Sanitary Ware/Neycer/Parry' or equivalent of approved make, white in colour and of one piece construction. All metallic fixtures like taps, stop cocks, soap holders etc. shall be of CP brass 'Parco', 'GEM' or approved equivalent make. PVC fixtures shall be of 'Caliplast', 'Brite' or equivalent approved make. All wall fittings shall be fixed with wooden cleats and CP brass screws and washers

5.142 SANITARY WARE:

All fittings shall be malleable cast iron fittings as per IS:1879 (or as revised). All fittings shall have manufacturer's trademark stamped on it. Fittings in G.I. pipelines shall include elbows, tees, bends, reducers, nipples, union, bushes, G.I. Clamps of approved design, G.I. flanges with 3 mm rubber insertion, nuts, bolts, washers, etc. All fittings shall be tested at manufacturer's works. Contractors may be required to produce certificate to this effect from the manufacture.

Wash Down Type Water Closet: Wash down water closet shall be pattern 1 conforming to IS:2556 Part II. This shall be fixed with plastic seat and cover as per IS:2548 of 'Brite' or approved equivalent make, fixed with CP brass hinges and rubber buffers and an integral 100 mm dia 'S' or 'P' trap with anti-syphonage vent horn.

A low level earthenware cistern conforming to IS:774 of about 10 litres capacity, with 15 mm dia PVC inlet pipe and brass union with wiped solder joint, internal overflow arrangement, 40 mm dia CP brass flushing pipe, CI or MS supporting brackets shall be fixed with the water closet. The closet shall be fixed firmly in the floor with matching cement mortar. The cistern shall be fixed at a height not exceeding 300 mm between the top of the pan and the underside of the cistern.

Urinals: Half stall type urinal shall be conforming to IS:2556 Part VI. These shall be mounted on walls. The flushing inlet pipe shall be of CP brass 15 mm dia and waste pipe 32 mm dia G.I. 750 mm long, with necessary unions and CP bottle trap.

Rawl plugs with CP brass screws, shall be used for fixing the urinal. Fixing shall ensure that no liquid is left over in the pan after flushing. Unless otherwise indicated height above finished floors shall be 650 mm.

Urinals shall be connected to automatic flushing cistern either individually, or in groups where individually connected to flushing cistern, the cistern capacity shall be 5 litres. For two urinals, one cistern of 10 litres capacity and for three urinals, one cistern of 15 litres capacity shall be

provided.

Cistern inlet shall be 15 mm dia PVC pipe with brass union. Outlet pipe from cistern shall be 25 mm CP brass main, with 15mm CP distributor pipe of sufficient lengths to reach each bowl. Where individual cisterns are provided, the outlet shall be of 15 mm CP brass.

Wash Basin: Wash basin shall be flat back of 550 mm x 400 mm size with one tap or two tap hole confirming to IS:2556 Part -IV. This shall be fitted on CI or MS brackets conforming to IS:775. Brackets shall be given two coats of white enamel paint or enamel paint or aluminium paint, over a coat of primer.

The wall side shall be fixed well flushed with the plaster of wall and the joint if any, shall be properly stopped with mortar and painted white. Pillar cocks, PVC connecting pipe with brass union, a CP brass bottle trap with union, CP brass chain and rubber PVC stopper, 32 mm dia, GI waste pipe shall also be supplied and fitted with the wash basin, the top of rim of the wash basin shall be fixed at 800 mm above finished floor level unless otherwise specified.

Mirrors: The mirror shall be of the best quality of 'Atul'/'Swastic' or equivalent approved make of size 600 mm x 650 mm x 5.5 mm thick. The mirror shall have ½" thick commercial board backing and shall be provided with aluminium beading all around. It shall be fixed to the wall on wooden blocks with CP brass screws and CP washers.

Bib and Stop Cock: Bid and stop cocks of screw-down type shall conform to IS:781. All taps shall be of heavy grade. The taps shall be chromium plated brass or ordinary brass easy cleaning type as specified.

Nahni Trap: Nahni trap shall be of heavy cast iron as per IS:3989 with 100 mm inlet and 80/100 mm outlet with CP pressed steel grating. It shall be of self-cleaning design (Grating shall be of either hinged or screwed down type).

It shall be fixed in cement mortar 1:2 and as directed by Employer.

Brick Masonry Chamber (Manholes/Inspection Chamber & Valve Chamber): The size of the manholes and valve chambers shall be as specified in the drawings. It shall be constructed of brick masonry walls 230 mm thick in CM 1:4 (1 cement:4 sand) resting on M-15 concrete foundations. The inside and outside faced of the masonry wall shall be plastered with 13 mm thick plaster of cement mortar 1:3 (1 cement : 3 sand).

The top of the chamber shall be provided with reinforced concrete M-20 grade slab as per drawing and directions of the Employer.

MS rungs made out of 16 mm dia MS bars shall be fixed inside the manhole as shown in the drawing after applying two coats of anticorrosive paint.

Valve chambers shall be provided and fixed with a light duty CI cover and frame.

The top of chamber shall be provided with reinforced cement concrete M-15 grade as per drawings and direction of the Employer.

The CI manhole covers and frames shall conform to IS:726. The type, size and grade shall be as per drawing and direction of the Employer.

The frame shall be fixed in position during concreting of top slab, inside faces of frame and cover shall be given two coats of approved anti-corrosive paint.

- 5.143** 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, Pricebid 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.

5.144 All the materials/makes listed below and other than as specified shall be ordered and used after obtaining prior approval from the Engineer-in-charge.

<u>LIST OF APPROVED MAKE</u>		
Sr. No.	Description	Approved Brand
1.	Paint, Primer,	Asian, ICI, Nerolac
2.	Putty	Birla, Asian
3.	Polish	MRF, Asian, ICI
4.	Hardware	Kitch, Durex, EPPW, Ebco, Palladium, Dorma
5.	Adhesive	Fevicol, Kitcol, Araldite, BAL
6.	Anchor fastener / bolts	Fischer Hilti
7.	Floor spring	Hemco, Hyper, Sterling, Godrej,
8.	Door closer	Efficient Gadget, Godrej,
9.	Aluminium sections	Jindal,
10.	Aluminium Finish	25 micron colour anodized – contractor should provide the micron thickness measuring equipment atsite throughout the work progress for checking the anodizing thickness, visibly should looks uniform as per standards.
11.	All Aluminium anodized fittings	EP & PW or equivalent
12.	SANITARY WARES	1) CERA 2) DURAVIT 3) AMERICAN STANDARD 4) KOHLER 5) VERMORA 6) SIMPOLO
13.	CP FIXTURES AND ACCESSORIES	1) JAQUAR 2) HANS GROHE 3) GROHE 4) PARRYWARE – ROCA 5) AMERICAN STANDARD 6) KOHLER 7) ESCO
14.	GI PIPES	1) TATA 2) JINDAL 3) APL Apollo
15.	APVC PIPES & FITTINGS	1) FINOLEX 2) SUPREME 3) PRINCE 4) ASTRAL 5) ASHIRWAD 6) HINDWARE
16.	STONEWARE PIPES AND FITTINGS	1) APPROVED MAKE ISI
17.	SS SINK	1) AMC 2) KRISHNA 3) NIRALI
18.	CEMENT	OPC Ambuja, Ultratech, Birla Plus,

<u>LIST OF APPROVED MAKE</u>		
Sr. No.	Description	Approved Brand
19.	White Cement	Birla, J. K.
20.	TMT – Fe-550 Ribbed bars	TATA,SAIL, RINL(VIZAG),
21.	Structural Steel	TATA, SAIL, JINDAL
22.	Structural Hollow steel sections (Square and Rectangular)	SAIL, Asian or equivalent
23.	Structural tubular sections	Tata, Sail, Asian or Equivalent.
24.	Coarse Aggregates 6 mm to 40 mm sizes	Approved quarry by EIC
25.	Stone Rubbles & Gravels	Approved Quarry by EIC
26.	Shuttering plywood	Kitply, Anchor, Green, Pragati or equivalent
27.	Marine Grade plywood IS-710	Green, Kitply, Duro, Century, Anchor
28.	Commercial plywood – IS – 303	Green, Kitply, Duro, Century, Anchor
29.	Decorative ply (Veneer)	Green, Century, Kalachandra, Archid
30.	Pre laminate particle board	Novapan, Bhutan
31.	Laminate sheet	Greenlam, Alfa-Ica, Decolam, Neoluxe
32.	Cement bonded particle board	NCL (Bison board), Everest (Eternite)
33.	Calcium silicate board	Hilux
34.	Flush door – decorative / non decorative	Green, Anchor, Century
35.	Locks	Godrej, EPPW, Dorset,
36.	Float Glass/Mirror/Wired Glass	Modi Guard, Saint gobain, Ashahi
37.	Tiles	Kajaria, Simpolo, Varmora
38.	Construction chemicals	Fosroc, Pidilite, Sika

5.145 While evaluating similar works, amount of work done excluding GST to be considered only.

5.146 All the materials/makes listed below and other than as specified shall be ordered and used after obtaining prior approval from the Engineer-in-charge.

5.147 DPA may appoint Third Party Inspection Agency. Contractor has to obey the instructions given by TPI during execution of the work including necessary testing / inspection etc. This work may also be inspected 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.

5.148 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/ Performance guarantee shall be 10% of Contract price of which 5% of contract price should be submitted as FDR or Insurance Surety Bond / Bank Guarantee of Nationalized/scheduled bank (except Co-operative) Banks having its branch at Gandhidham, and BG should remain valid for 60 (Sixty) days beyond the date of completion of all contractual obligation of the concerned contract including Defect liability period or Digital transfer within (21 days in case of domestic bid and within 28 days in case of global bids) 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 5.24), NOC from Geology and Mining Department, Bhuj/Anjar & Payment of welfare cess for final bill.

In addition to performance security (usually five percent), contracts for works usually provide for a percentage (usually five percent) of each running bill (periodic/interim payment) to be withheld as security deposit/retention money until final acceptance. The earnest money instead of being released may form part of the security deposit.

The contractor may, at his option, replace the retention amount with an unconditional BG from a bank acceptance to the procuring entity at the following stages;

- I. After the amount reaches half of the value of the limit of retention money and
- II. After the amount reaches the maximum limit of retention money. One-half of the retention money (of BG, which replaced retention money) shall be released on the issue of the taking-over certificates (TOCs) are issued in parts, then in such proportions as the engineer may determine, having regard to the value of such part or section. The other half of the retention money (or BG, which replaced the retention money) shall be released upon expiration of 365 days after the DLP of the work or final payment, whichever is earlier on certification by the engineer. In the event of different applicable to different defect liability periods being applicable to different sections or parts, the expiration of defect liability period shall be the latest of such periods.

In case of JV, the BG towards performance security shall be provided by all partners in proportion to their participation

Failure of the successful bidder to comply with the requirements of above shall constitute sufficient grounds for cancellation of the award of work and forfeiture of the Bid security.

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 on final bill shall be submitted before releasing the Performance Guarantee.

5.149 Corrupt or Fraudulent Practices

"Code of integrity for public procurement – Procuring authorities as well as bidders, contractors and consultants should observe the highest standard of ethics and should not indulge in the following prohibited practices, either directly or indirectly, at any stage during the procurement process or during execution of resultant contracts.

- (i) "Corrupt practice: making offers, solicitation or acceptance of bribe, rewards or gifts or any material benefit, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process or contract execution.
- (ii) "Fraudulent practice: any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefits may be obtained or an obligation avoided. This includes making false declaration or providing false information for participation in a tender process or to secure a contract or in execution of the contract.
- (iii) "Anti-competitive practice": any collusion, bid rigging or anti-competitive, bid rigging or anti-competitive arrangement or any other practice coming under the purview of the competition act, 2002 between two or more bidders, with or without the knowledge of the procuring entity that may impair the transparency, fairness and the progress or to

establish bid prices at artificial non-competitive levels;

- (iv) "Coercive practice": harming or threatening to harm, persons or their property to influence their participation in the procurement process or affect the execution of a contract.
- (v) "Conflict of interest": participation by a bidding firm or any of its affiliates that are either involved in the consultancy contract to which this procurement is linked or if they are part of more than one bid in the procurement or if the bidding firm or their personnel have relationships of financial or business transactions with any official of procuring entity who are directly or indirectly related to tender or execution process of contract or improper use of information obtained by the (prospective) bidder from the procuring entity with an intent to gain unfair advantage in the procurement process or for personal gain and
- (vi) "Obstructive practice": materially impede the procuring entity's investigation into allegations of one or more of the above mentioned prohibited practices either by deliberately destroying, falsifying, altering or by concealing of evidence material to the investigations or by making false statements to investigators and/or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigations or from pursuing the investigations or by impeding the procuring entity's rights of audit or access to information.

5.150 Contractor has to manage/arrange to site access for construction purpose without any additional cost. Also, if jack-up arrangement may require, cost for the same born by the contractor.

5.151 Individual quantity for any tender items of work may vary to any extent as required by DPA for which the contractor shall not submit any dispute/claim what-so-ever, so long as the total amount of such variation does not exceed plus or minus 30% of the total contract value awarded.

Contractor

**EXECUTIVE ENGINEER (C-1)
DEENDAYAL PORT AUTHORITY**

SECTION 6

DRAWING

SECTION 7

BILL OF QUANTITIES

SECTION 8

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.500/- 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 to do so should also be enclosed]

SPECIMEN BANK GUARANTEE PERFORMANCE
GUARANTEE / SECURITY DEPOSIT

(To be executed on Rs.500/- 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 incorporated by the Major Port Authority 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 of, 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.

1. 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.

2. 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.
3. 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.
4. 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 anytime 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.
5. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
6. It is also hereby agreed that the Courts in **Gandhidham** would have exclusive jurisdiction in respect of claims, if any, under this Guarantee.
7. We, _____ Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Board in writing.
8. 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

SPECIMEN BANK GUARANTEE FOR ADVANCE PAYMENT

(To be executed on Rs.500/- 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 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 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 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**] 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

**SPECIMEN BANK GUARANTEE FOR
STAGE PAYMENT**
(To be executed on Rs. 500/- 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 Trustees of the Port of [insert name of port] incorporated by the Deendayal Port Authority as amended by Major Port Authority(Amendment) 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 Trustees of the port of [insert name of port], its successors and assigns) having agreed to release Stage 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 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)

_____(hereinafter 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.

1. 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.

2. 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.

3. 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.

4. 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.

5. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
6. It is also hereby agreed that the Courts in [insert city] would have exclusive jurisdiction in respect of claims, if any, under this Guarantee.
7. We, _____ Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Board in writing.
8. 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

(To be executed on Rs.500/- 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 (Not applicable)]

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 DR Board.

- (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 DR Board.
 - (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 DR Board 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,

dated_____ Sub: Our Bank Guarantee No. _____
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.500/- 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 of2026 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 **Construction of Oil Jetty No.10 at Kandla.**

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

**PROFORMA OF POWER- OF-ATTORNEY FOR LEAD
MEMBER 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 2026, 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 **Construction of Oil Jetty No.10 at Kandla** 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: *[insert Tenderer's legal name]*

2. JV's Party legal name: *[insert JV's Party legal name]*

JV's Legal Lead Partner {insert name and address}

3. JV's Party Country of Registration: *[insert JV's Party country of registration and details of registration]*

4. JV's Party year of Registration: *[insert JV's Party year of registration]*

5. JV's Party Legal Address in Country of Registration: *[insert JV's Party legal address in country of registration]*

6. JV's Party Authorized Representative information

Name: *[insert name of JV's Party authorized representative]*

Address: *[insert address of JV's Party authorized representative]*

Telephone/Fax numbers: *[insert telephone/fax numbers of JV's Party authorized representative]*

Email Address: *[insert email address of JV's Party authorized representative]*

7. Attached are copies of original documents of [check the box(es) of the attached original documents]

☐ Articles of incorporation or registration of firm named in 2, above, in accordance with tender document.

☐ In case of government owned entity from India, documents establishing legal and financial autonomy and compliance with commercial law, in accordance with Tender Documents

PAN Number

Sales Tax / VAT registration number

Service Tax Registration Number

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

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. C-I:01/2026**. 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 Section 9.
 - (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 Section 9.

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 should sign the Integrity Pact.

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 competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. 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

- 9.1. This Pact shall be operative from the date of signing of IP by both the parties till the final completion of contract of successful bidder and for all other bidders six months after the contract has been awarded. Issues like warranty, guarantee, etc. should be outside the purview of IEMs.
- 9.2. If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Pact, as specified above unless it is discharged / determined by the Chairperson, DPA.

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. Gandhidham, 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)

(For & on behalf of the Bidder / Contractor)

(Office Seal)

(Office Seal)

Witness-1:
(Name & Address)

Abhishek Dait
Gandhidham

Witness-1:
(Name & Address)

Place : Gandhidham Date : ___/___/20___

Note: The bidder has to execute Integrity Pact Agreement with Deendayal Port Authority (as per Bid Response Sheet No. 10 and Shri Amiya Kumar Mohapatra, IFoS (Retd.) and Dr. Gopal Dhawan, Ex-CMD, MECL have been appointed by DPA as independent External Monitors and whose address are as under: -

1. **Shri Amiya Kumar Mohapatra, IFoS (Retd.)**

Qrs. No. 5/9, Unit-9, Bhoi Nagar,

Bhubaneswar-751 022

Mobile no. 9437002530

Email: amiyaifs@gmail.com

2. **Dr. Gopal Dhawan, Ex-CMD, MECL,**

House no. 120, Jal Shakti Vihar

(NHPC Society) P4, Builders area,

Greater Noida Gautam Budh Nagar,

Utter Pradesh - 201 315

Mobile no. - 8007771467

Email: gdhawangeologist@gmail.com

Annexure-II

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)

FORM – 23 A

Format of Insurance Surety Bond for Earnest Money Deposit

(To be executed on Non-Judicial Stamp Paper of Appropriate value)

Insurance Surety Bond No

Date:.....

(Name of Contract)

To: (Name and address of Employer)

WHEREAS (name of Bidder) (hereinafter called "the Bidder") has submitted its Bid dated (date of bid) for the performance of the above named Contract (hereinafter called "the Bid")

KNOW ALL PERSONS by these present that We (name of Insurance Company) of..... KNOW ALL PERSONS by these present that We (name of Insurance Company) of..... (address of Insurance Company) (hereinafter called "the Surety"), are bound unto the Board of Deendayal Port Authority (hereinafter called "the Employer") for the sum of. (amount), for which payment well and truly to be made to the said Employer, the Surety binds itself, its successors and assigns by these presents.

THE CONDITIONS of this obligation are as follows:

1. If the Bidder (a) withdraws or modifies its Bid during the period of bid validity, or (b) adopts corrupt or collusive or coercive or fraudulent practices or defaults under Integrity Pact.
2. If the Bidder, having been notified of the acceptance of its Bid by the Employer during the period of bid validity.
 - (a) fails or refuses to sign the Contract Agreement when required, or
 - (b) fails or refuses to submit the performance security in accordance with the Tender Documents.

We undertake to pay to the Employer up to the above amount upon receipt of its first written demand, without the Employer having to substantiate its demand, provided that in its demand the Employer will mention that the amount claimed by it is due, owing to the occurrence of one or both of the two above-named CONDITIONS, and specifying the occurred condition or conditions.

The Surety declares that this Insurance Surety Bond is issued by the (name of Insurance Company) as per the applicable rules and regulations of Insurance Regulatory Development Authority of India (IRDAI).

This Insurance Surety Bond will remain in force up to and including (date 90 days after the period of bid validity), and any demand in respect thereof must reach the Surety not later than the above date.

Name of

For and on behalf of the Insurance Company

In the capacity of

Common Seal of the Insurance Company with complete address including Tel. Nos./e-Mail Id.

Staff Authority No. of the officer of the Insurance Company/Signatory

INSTRUCTIONS FOR EXECUTION OF INSURANCE SURETY BOND FOR EARNEST MONEY DEPOSIT

1. Insurance Surety Bond for Earnest Money Deposit should be executed on non-judicial Stamp papers of requisite value in accordance with the stamp Act if applicable to that particular state of Indian Union country of executing Insurance Company, where executed. In case the same is issued by an International Insurance Company (it should be registered under insurance Act 1938 or as amended from time to time and approved by the Insurance Regulatory Development Authority of India (IRDAI)) the law prevalent in the country of execution shall prevail for the purpose of Stamp Duty on the Insurance Surety Bond. However, in such a case, the Insurance Surety Bond for Earnest Money Deposit shall be got confirmed by the Bidder through any Indian Scheduled/Nationalized Insurance Company.
2. The executing officers of the Insurance Surety Bond for Earnest Money/Bid Security shall clearly indicate in (block letters) his name, designation, Power of Attorney No./Signing Power No. as well as telephone/ fax numbers with full correspondence address of the issuing Guarantee etc.
3. Each page of the Insurance Surety Bond for Earnest Money Deposit shall be duly signed/initialed by the executing officers and the last page shall be signed in full, indicating the particulars as aforesaid (sub-para 2) under the seal of the Insurance Company
4. Stamp paper shall be purchased in the name of Insurance Company counting the Insurance Surety Bond, after the date 'Notice Inviting Tender', not more than six months prior to execution/issuance of the Insurance Surety Bond. The name of the purchaser should appear at the back side of stamp paper in the Vendors Sign. The issuing insurance Company shall be requested independently for verification/confirmation of the Insurance Surety Bond issued, no confirmation of which may lead to rejection of 'Insurance Surety Bond'.
5. Irrevocable, valid and fully enforceable Insurance Surety Bond in favor of the Employer (Name of Employer) issued by any Insurance Company registered under insurance Act amended from time to time and approved by the insurance Regulatory Development Authority of India (IRDA) in Indian currency (INR) only is acceptable to the Employer.
6. Insurance Surety and for Bid security in original shall be submitted along with the Bid. However, the issuing Insurance Company shall submit an unstamped duplicate copy of Insurance Surety Bond directly by registered post (A.D.) to the Employer (authority inviting tenders) with forwarding letter.

FORM – 8 A

FORMAT FOR INSURANCE SURETY BOND FOR PERFORMANCE GUARANTEE

(To be executed on Non-Judicial Stamp Paper of Appropriate value)

Insurance Surety Bond No

Date:.....

(Name of Contract)

To:

The Board of Authorities of the Port of Kandla
Deendayal Port Authority
A.O. Building, P.O.Box No.50,
Gandhidham – Kutch

Dear Sirs;

In consideration of the Board of Deendayal Port Authority of the Port of DEENDAYAL PORT AUTHORITY (hereinafter called as "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 the Port of [DEENDAYAL PORT AUTHORITY], its successors and assigns) having awarded to M/s. [Contractor's Name] With its Registered / Head Office at (hereinafter referred to as the "Contractor", which expression shall unless or repugnant to the context or meaning thereof, includes its successors administrators, executors and assigns), a contract by issue of Employer's Letter of Acceptance No. dated And the same having been acknowledged by the Contractor, for [contract sum in figures and words] for [Name of the work] and the contractor having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire contract equivalent to (*) of the said value of the aforesaid work under the contract to the Employer.

We..... [Name & Address of the Insurance Company) Having its Head Office at (hereinafter referred to as the 'Surety', which expression shall, unless repugnant to the context of meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Employer, on demand any and all monies payable by the Contractor to the extent of (*) as aforesaid at any time upto (@) [days/month/year] without any demur, reservation, contest, recourse or protest and/or without any reference to the Contractor. Any such demand made by the Employer on the Insurance Company shall be conclusive and binding notwithstanding any difference between the Employer and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority.

The Surety undertakes not to revoke this guarantee during its currency without previous consent of the Employer and further agrees that the guarantees herein contained shall continue to be enforceable till the Employer discharges this guarantee or till [days/month/year] whichever is earlier.

The Employer shall have the fullest liberty, without affecting in any way the liability of the Insurance company under this guarantee, from time to time to extend the time for performance of the Contract by the Contractor. The Employer shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor, and to exercise the same at any time in any manner, and either to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the Employer and the Contractor or any other course or remedy

or security available to the Employer. The Insurance company shall not be released of its obligations under these presents by any exercise by the Employer of its liberty with reference to the matters aforesaid or any of them or by reason of any other act or forbearance or other acts of omission or commission on the part of the Employer or any other indulgence shown by the Employer or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Insurance Company.

The Surety declares that this Insurance Surety Bond is issued by the name of Insurance Company) as per applicable rules and regulations of insurance regulatory development authority of India (IRDAI), and also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Insurance Company as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Employer may have in relation to the Contractor's liabilities.

- i) Our liability under this Insurance Surety Bond shall not exceed (*)
- ii) This Insurance Surety Bond shall be valid upto (+)
- iii) We are liable to pay the guaranteed amount or any part thereof under this Insurance Surety Bond only and only if Employer serve upon Insurance Callpany a written claim or demand or or before (@)

Dated this ..,..... day of20 at

WITNESS

Signed for and On behalf of the Insurance Company

1
(Signature)

.....
(Signature)

.....
(Name)

.....
(Name)

Notes:

1. (*) This sum shall be **Five percent (5%)** of the accepted tender value denominated in the types and proportions of currencies.

(@) The Performance Guarantee should be valid for a period of 60 days beyond the date of completion of all contractual obligations of the contractor, including Defect Liability Period.

(+) This date will be the date of issue of defect liability Certificate (if applicable)

2. Insurance Surety Bond should be executed on appropriate stamp paper of requisite value, such stamp paper should be purchalled in the name of Issuing Insurance Company, not more than six (6) months prior to execution / issuarice of Insurance Surety Bond. The name of the purchaser should appear at the back side of stamp paper in the Vendors Stamp. Insurance Surety Bond should contain rubber stamp of the authorized signatory of the Insurance Company indicating the name, designation and signature/ power of attorney number as well as telephone numbers / e-Mail Id with full correspondence address of the Insurance CompanyIn case the same is issued by an International Insurance Company (it should be registered under Insurance Act 1938 or as amended from time to time and approved by the Insurance Regulatory Development Authority of India (IRDAI)), the law prevalent in the country of execution shall prevail for the purpose of Stamp Duty on the Insurance Surety Bond. However, in such a case, the Insurance Surety Bond shall be got confirmed through any Indian Scheduled/Nationalized Insurance Company.
3. Insurance. Surety Bond is required to be submitted directly to the Employer by the issuing Insurance Company (on behalf of Contractor) under registered post (A.D.). The Contractor can submit an advance copy of Insurance Surety Bond to the Engineer.
4. The issuing Insurance Company shall write the name of Insurance Company's controlling branch/ Head Office along wmh contact details like telephone no., e-Mail Id and full correspondence address in order to get the confirmation of Insurance Surety Bond from that branch/ Head office, if so required

SECTION 9

GUIDELINES ON BANNING OF BUSINESS DEALINGS (Effective from 01/01/2023)



**DEENDAYAL PORT AUTHORITY
(Formerly known as Kandla Port Trust)
GANDHIDHAM - KUTCH - GUJARAT - 370 201.**

Sr. No.	CONTENTS	Page
1.	Introduction	9
2.	Scope	9-10
3.	Definitions	10-11
4.	Initiation of Banning / Suspension	11-12
5.	Suspension of Business Dealings	12-13
6.	Grounds on which Banning of Business Dealings can be initiated	13-15
7.	Banning of Business Dealings	15-18
8.	Department / Division wide Hold on participation of the Agency in Tenders	18
9.	Show-cause Notice	18-19
10.	Appeal against the Decision of the Competent Authority	19
11.	Circulation of the names of Agencies with whom Business Dealings have been banned	19-20
12.	Saving	20

1. Introduction

- 1.1 "Board" of Deendayal Port Authority (DPA) constituted by the Central Government in accordance with sub-section (1) of section 3 of the Major Port Authorities Act, 2021, has to ensure preservation of rights enshrined under the above Act. DPA has also to safeguard its commercial interests. DPA is committed to deal with Agencies, who have a very high degree of integrity, commitment and sincerity towards the work undertaken. It is not in the interest of DPA to deal with Agencies who commit deception, fraud or other misconduct while participating in tenders/in the execution of contracts awarded/orders issued to them. In order to ensure compliance with the constitutional mandate, it is incumbent on DPA to observe principles of natural justice before banning the business dealings with any Agency.
- 1.2 Since banning of business dealings involves civil consequences for an Agency concerned, it is incumbent that adequate opportunity for hearing is provided and the explanation, if tendered, is considered before passing any order in this regard keeping in view the facts and circumstances of the case.
- 1.3 The objective of these guidelines is to have a common procedure for Banning of Business Dealings with Agencies across the Company.

2. Scope

- 2.1 These guidelines are applicable to the sale and procurement of goods & services including contracts / projects across all the Departments and Divisions of DPA.
- 2.2 The General Conditions of Contract (GCC) of DPA provide that DPA reserves the rights to keep on hold participation in tenders or to ban business dealings if any Agency has been found to have committed misconduct and also to suspend business dealings pending investigation. If such provision does not exist in any GCC, the same may be incorporated.
- 2.3 Similarly, in the case of sale of material, there is a clause in Sale Order to deal with the Agencies / customers / buyers, who indulge in lifting of material in unauthorized manner. This should also include all activities including unauthorized selling of the material. If such a stipulation does not exist in any Sale Order, the same may be incorporated.
- 2.4 However, absence of such a clause as mentioned at para 2.2 & 2.3 above does not in any way restrict the right of the Board (DPA) to take action / decision under these guidelines in appropriate cases.
- 2.5 The procedure for (i) Board wide Hold on participation of the Agency in Tenders (ii) Suspension and (iii) Banning of Business Dealings with Agencies, has been laid down in these guidelines.
- 2.6 It is clarified that these guidelines do not deal with the decision of the Management not to entertain any particular Agency due to its poor / inadequate performance or for any other reason.
- 2.7 The banning shall be with prospective effect, i.e., future business dealings.

3. Definitions

In these Guidelines, unless the context otherwise requires:

- i) 'Party / Contractor / Supplier / Purchaser / Customer / Bidder / Tenderer' shall mean and include a public limited company or a private limited company, a firm whether registered or not, an individual, partnership firm, Limited Liability Partnership, a cooperative society or an association or a group of persons engaged in any commerce, trade, industry, etc. Party / Contractor / Supplier / Purchaser / Customer / Bidder / Tenderer' in the context of these guidelines is termed as 'Agency.'
- ii) 'Inter-connected Agency' shall mean two or more companies having any of the following features:
 - a) If one is a subsidiary of the other;
 - b) If the Functional Director(s), Partner(s), Manager(s) or Representative(s) are common;
 - c) If management is common;
 - d) If one owns or controls the other in any manner;

- e) If the agencies have same authorized signatory (ies)
- f) If they have the same address/same Permanent Account Number / same Bank Account Number / common email ID.

Note: This list is only illustrative in nature.

iii) 'Competent Authority' and 'Appellate Authority' shall mean the following:

Area of Banning/ Suspension	Competent Authority	1st Appellate Authority	2nd Appellate Authority
Board-wide banning	HoD of the Board	Chairman, DPA	--
Banning / Suspension of business dealings with Foreign supplier of imported coal & coke	HoD's Committee	Chairman, DPA	DPA Board**
Board wide Suspension of business dealings with Agency	Officer nominated by Chairman of Board. For Department headed by HoDs, the respective HoDs will nominate the officer for this purpose.*	Chairman of the Board. For Departments headed by HoDs, the respective HoDs will be the Appellate Authority.	--
Board wide Hold on participation of the Agency in Tenders #	Officer nominated by Chairman of Board. For Departments headed by HoDs, the respective HoDs will nominate the officer for this purpose.*	Chairman of the Board. For Departments headed by HoDs, the respective HoDs will be the Appellate Authority.	--

* For Board – The nominated officer shall be a Direct Reporting Officer (DRO) not below the rank of Head of the Department for “Competent Authority” for the purpose of suspension of business dealings with the Agency as well as for Board wide Hold on participation of the Agency in tenders under these guidelines. For Corporate Office, in case of procurement of items / award of contracts to meet the requirement of Corporate Office only, Head of Department shall be the Competent Authority and HoD concerned shall be the Appellate Authority. The Management of Subsidiary shall define / appoint the “Competent Authority”, Appellate Authority & Standing Banning Committee in their respective cases.

This provision for Hold on participation of the Agency in tenders shall be applicable only in such case where Standing Banning Committee recommends for keeping on Hold the participation in tenders and which shall be limited to particular Department / Division.

** This would be applicable only in cases of banning of business dealings with Foreign Suppliers of imported coal and coke.

iv) 'Investigating Department' shall mean any Department or Division investigating into the conduct of the Agency and shall include the Vigilance Department, Central Bureau of Investigation, the State Police or any other department set up by the Central or State Government having powers to investigate.

4. Initiation of Banning/Suspension

Action for banning/suspension of business dealings with any Agency should be initiated by the Concerned Department such as Indenting / Contracting / Executing Departments, etc. having business dealings with Agency or by the department which floated the tender (in case where the tenderer has committed deception, fraud or other misconduct) subsequent to noticing the irregularities or misconduct on their part.

5. Suspension of Business Dealings

- 5.1 If the conduct of any Agency (except Foreign Suppliers of imported coal and coke) dealing with DPA is under investigation by any department of any Department, the Concerned Department may consider whether the allegations under investigations are of serious nature and whether pending investigations, it would be advisable to suspend (temporarily discontinue) business dealings with the Agency. Recommendation in the matter shall be submitted to the Competent Authority for this purpose.
- 5.2 If the Competent Authority, after consideration of the matter including the recommendation of the Investigating Department, decides that it would not be in the interest of Department of DPA to continue business dealings pending investigation, it may suspend business dealings with the Agency. The Suspension Order to this effect shall be issued by the Head of Concerned Department or by his representative / concerned executive with the approval of the Head of the Concerned Department, indicating a brief of the charges under investigation and the period of suspension. If it is decided that inter-connected Agencies would also come within the ambit of the order of suspension, the same should be specifically stated in the order. Ordinarily, the order of suspension would operate for a period not more than six months and may be communicated to the Agency and also to the Investigating Department.

Further to the suspension, the investigation, recommendation by the Standing Banning Committee (SBC) and final decision by the Competent Authority to be completed within six months from order of suspension.

- 5.3 The order of suspension of business dealings with the Agency under investigation shall be communicated to all Departmental Heads within the Board. During the period of suspension, no fresh contract will be entered into with the Agency. Suspension would be valid only for the concerned Board.
- 5.4 As far as possible, the Agency under suspension should be allowed to complete the job of existing contracts, unless the Competent Authority, having regard to the circumstances of the case, decides otherwise. Once the order for suspension is issued, existing offers against ongoing tenders (prior to issuance of contract)/ new offers of the Agency shall not be entertained during the period of suspension.
- 5.5 For suspension of business dealings with Foreign Suppliers of imported coal & coke, following shall be the procedure:-
- i) Suspension of the foreign suppliers shall apply throughout the Board including Subsidiaries.
 - ii) The complaint against any foreign supplier shall be investigated by Board or by any other Investigating Department. If the gravity of the misconduct under investigation is found serious and it is felt that it would not be in the interest of DPA to continue to deal with such Foreign

Supplier, pending investigation, the recommendation on such matter by Investigating Department (including Board) may be sent to Chairman, DPA to place it before a Committee consisting of the following:

1. Head of Finance Department,
2. Head of Department
3. Head of Law / Legal Division

The committee shall expeditiously examine the report; give its comments / recommendations within twenty one days of receipt of the reference by DPA.

- iii) The comments / recommendations of the Committee shall then be placed before DPA Board's Committee. If DPA Board's Committee decides that it is a fit case for suspension, Board's Committee shall pass necessary orders which shall be communicated to the foreign supplier by Head of Department.
- 5.6 If the Agency concerned asks for detailed reasons of suspension, the Agency may be informed that its conduct is under investigation. It is not necessary to enter into correspondence or argument with the Agency at this stage.
- 5.7 It is not necessary to give any show-cause notice or personal hearing to the Agency before issuing the order of suspension. However, if investigations are not complete in six months' time, the Competent Authority with approval of Head of the Department may extend the period of suspension by another three months, during which period the investigation must be completed.

6. Grounds on which Banning of Business Dealings can be initiated

- 6.1 If the security consideration, including questions of loyalty of the Agency to the State, so warrants;
- 6.2 If the Director / Owner of the Agency, proprietor or partner of the firm, is convicted by a Court of Law for offences involving moral turpitude in relation to its business dealings with the Government or any other public sector enterprises or DPA, during the last five years preceding date of tender opening or during execution of contract, provided such information is known to DPA;
- 6.3 If there is strong justification for believing that the Directors, Proprietors, Partners, owner of the Agency have been guilty of malpractices such as bribery, corruption, fraud, substitution of tenders, interpolations, etc. during the last five years preceding date of tender opening or during execution of contract, provided such information is known to DPA;
- 6.4 If the Agency continuously refuses to return / refund the dues of DPA without showing adequate reason and this is not due to any reasonable dispute which would attract proceedings in Arbitration or Court of Law;
- 6.5 If the Agency employs a public servant dismissed / removed or employs a person convicted for an offence involving corruption or abetment of such offence, provided such information is known to DPA;
- 6.6 If business dealings with the Agency have been banned by the Central or State Govt. or any other public sector enterprise at the time of submitting his bid or on the date of tender opening or at the time of placement of order, provided such information is known to DPA;
- 6.7 If the Agency has resorted to Corrupt, fraudulent practices including misrepresentation of facts and / or fudging / forging / tampering of documents; **Ω**
- 6.8 If the Agency uses intimidation / threatening / misbehaves with DPA Official or brings undue outside pressure or influence on the Board (DPA) or its official in acceptance / performances of the job under the contract;
- 6.9 If the Agency indulges in repeated and / or deliberate use of delay tactics in complying with contractual stipulations / delayed the tendering process;
- 6.10 Wilful indulgence by the Agency in supplying sub-standard material irrespective of whether pre-dispatch inspection was carried out by Board (DPA) or not;
- 6.11 Based on the findings of the investigation report of Investigating Department against the Agency for mala-fide / unlawful acts or improper conduct on its part in matters relating to the Board (DPA) or even otherwise;
- 6.12 Established litigant nature of the Agency to derive undue benefit;
- 6.13 Continued poor performance of the Agency in several contracts;

- 6.14 If the Agency misuses the premises or facilities of the Board (DPA), forcefully occupies tampers or damages the Board's properties including land, water resources, forests / trees, etc.
- 6.15 If the Agency resorts to unauthorized sale of materials purchased from the Board.
- 6.16 If the Agency has committed a transgression through violation of any of its commitments under the Integrity Pact entered with DPA.

(Note: The examples given above are only illustrative and not exhaustive. The Competent Authority may decide to ban business dealings for any good and sufficient reason).

Ω No experience certificate shall be issued by Engineer in Charge / Executing Authority against the contract to the Agency found to have submitted forged / fabricated documents / indulged in corrupt / fraudulent practices.

7. Banning of Business Dealings.

- 7.1 A decision to ban business dealings with any Agency by any one of the Departments of DPA will apply throughout the Board including Divisions, i.e., Board-wide banning.
- 7.2 There will be a Standing Banning Committee (SBC) in each Department to be appointed by Competent Authority for processing the cases of "Banning of Business Dealings". However, for procurement of items / award of contracts, to meet the requirement of Board only, the Committee shall be HoD each from Operations, Finance & Law Departments. The proposal of the Concerned Department for initiating action under the Guidelines for Banning of Business Dealings based on their own findings and / or upon receipt of advice of the Investigating Department shall be forwarded through respective Head of Department to the Standing Banning Committee for consideration.
- 7.3 The functions of the Standing Banning Committee shall, inter-alia include:
 - i) To examine in detail the allegations / irregularities / misconduct mentioned in the proposal for banning forwarded by the Department, hold preliminary meeting and decide if a prima-facie case for banning under the guidelines exists. If during preliminary meeting, SBC is of opinion that prima facie no case is made out, it shall return the case to the Concerned Department.
 - ii) If it is decided to proceed for banning action, to recommend for issue of show-cause notice (as per para 9) to the Agency by the Concerned Department, as to why action should not be taken against the Agency, including its interconnected agencies, under the Guidelines for Banning of Business Dealings with them. Agency should be asked to submit its reply within 15 days of the show-cause notice.
 - iii) To examine the reply given by the Agency to show-cause notice and call the Agency for personal hearing, if required.
 - iv) To submit final recommendation to the Concerned Department for banning of business dealings with the Agency or Board wide Hold on participation of the Agency in tenders or exoneration.
- 7.4 If banning is recommended by the Standing Banning Committee of any Department / Division, the proposal containing the facts of the case, proper justification of the action proposed, relevant supporting documents along with the recommendation of the SBC and proposed banning period should be sent by the Concerned Department and duly forwarded by the Head of the Department / Division, to the Competent Authority. Based on this proposal, a decision for banning or otherwise shall be taken by the Competent Authority.

At this stage if it is felt by the Competent Authority that there is no sufficient ground for banning, then the case with detailed reasons shall be sent back to the respective Department / Division for necessary action at their end. The Competent Authority may consider and pass an appropriate Speaking Order:

- a) For exonerating the Agency if the charges / allegations are not established;
- b) For banning the business dealings with the Agency or

- c) For putting on Hold the participation of the Agency in tenders in the concerned Department / Division.

- 7.5 If the Competent Authority decides that it is a fit case for banning of business dealings with the Agency, the Competent Authority shall pass necessary orders which shall be routed back to the Department concerned for issuance of banning orders to the Agency. However, in cases where there is a shortage of suppliers and banning may hurt the overall interest of DPA, endeavor should be to pragmatically analyze the circumstances, try to reform the Supplier and to get a written commitment from them that their performance will improve.
- 7.6 If the Competent Authority decides to ban business dealings, the period for which the ban would be operative shall be mentioned. If applicable, the order may also mention that the ban would extend to the interconnected agencies of the Agency. The Speaking Order for banning would be conveyed by the Concerned Department to the Agency concerned and copy circulated to all Departments of DPA.
- 7.7 The Banning period may range from 1 year to 3 years depending on the gravity of the case as decided by the Competent Authority. Ordinarily, the period of banning shall be in the range of 1-2 years from the date of issuance of order depending on the severity of the irregularities / lapses committed / termination of contract due to poor performance, etc. However, in case of fraud / forgery / corrupt / fraudulent practice or tampering of documents by the Agency as given in para 6.7 above, the period of banning to be imposed on the Agency would be three years. The period of suspension, if any, shall be accounted for up to a maximum of 6 months in the period of banning provided the banning order is issued within the period of suspension.
- 7.8 As far as possible, the Agency under banning should be allowed to complete the job of existing contracts, unless the Competent Authority, having regard to the circumstances of the case, decides otherwise. Once the order for banning is issued, existing offers against ongoing tenders (prior to issuance of contract) / new offers of the Agency shall not be entertained during the period of banning. In addition, if the Agency has been banned under provisions of Para 6.7, then the particular contract in which the irregularity has been proved will be terminated with immediate effect. In exceptional cases, where it would not be prudent to terminate the said contract with immediate effect, the contract may be allowed to continue for such minimum period during which alternate arrangement(s) can be made. The same shall however require the approval of the Chairman / HoD where the exigency to continue the contract has been clearly brought out.
- 7.9 In case the Competent Authority has decided to exonerate the Agency, the Concerned Department will issue the exoneration letter to the Agency concerned as well as communicate to all Departmental Heads within the Department / Division. If the Agency has been suspended in the case under consideration, in the same letter to the Agency it must be clarified that the Suspension has also been revoked.
- 7.10 Procedure for Banning of Business Dealings with Foreign Suppliers.
- i) Banning of the Agencies shall apply throughout the Company including Subsidiaries.
 - ii) The complaint against any Foreign Supplier shall be investigated by Head of Department of DPA or any other Investigating Department. After investigation, depending upon the gravity of the misconduct, Investigating Department may send their report to Head of Department of DPA to place it before a Committee referred at 5.5 (ii) above. The Committee shall examine the report and give its comments / recommendations within 21 days of receipt of the reference by Head of Department, DPA.
 - iii) The comments / recommendations of the Committee shall be placed by Head of Department before DPA Board's Committee constituted for the above purpose. If DPA Board's Committee decides that it is a fit case for initiating banning action, it will direct Chairman of DPA to issue show-cause notice to the Agency for replying within a period of 15 days of receipt of the show-cause notice or reasonable time.
 - iv) On receipt of the reply or on expiry of the stipulated period, the case shall be submitted by DPA Board's Committee to Chairman of DPA for consideration & decision.

v) The decision of the Chairman of DPA shall be communicated to the Agency by DPA.

8. Department / Division wide Hold on participation of the Agency in Tenders

- 8.1 If the SBC recommends for Board wide Hold on participation of the Agency in Tenders on coming to a conclusion that the charge against the Agency is minor in nature, the Concerned Department shall put up a proposal to the Competent Authority containing facts of the case, proper justification of action proposed, relevant documents alongwith the recommendations of the Committee and proposed period for Hold from participation in tenders. If the Competent Authority decides that it is a fit case for Board wide Hold on participation of the Agency in tenders, the Competent Authority may pass necessary orders which shall be communicated to the Agency by the Concerned Department. The period of Hold may range from 6 months to 1 year.
- 8.2 The effect of Board wide Hold on participation of the Agency in tenders would be that the Agency would not be considered for any type of Tenders for such period as mentioned in the order at any stage before issuance of contract. Other existing contracts with the Agency would continue unless otherwise decided by the Competent Authority. However, no repeat orders would be placed on the party for the period as mentioned in the order.
- 8.3 The modalities for effecting Hold on participation of the Agency in tenders and re-entry after completion of period of Hold shall be worked out by the concerned Department / Division as the Hold is Department / Division specific.

9. Show-cause Notice

- 9.1 In case where the Competent Authority decides that action against an Agency is called for, a show-cause notice shall be issued to the Agency by the Concerned Department. Statement containing the imputation of misconduct should be appended to the show-cause notice and the Agency should be asked to submit within 15 days a written statement in its defence. It must be clearly mentioned in the Show-Cause Notice that DPA hereby proposes to initiate action against the Agency in terms of the Guidelines on Banning of Business Dealings. Generally, all communication with the Agency shall be through email mentioned by Agency in contract or last known email and postal address.
- 9.2 If the Agency requests for inspection of any relevant document in possession of DPA, necessary facility only for inspection of documents may be provided.

10. Appeal against the Decision of the Competent Authority

- 10.1 The Agency may file an appeal against the order of Board-wide banning of business dealings / suspension / Board wide Hold on participation of the Agency in tenders. The appeal shall lie to the respective Appellate Authority only. Such an appeal shall be preferred within 30 days of receipt of the order.
- 10.2 Appellate Authority would consider the appeal and pass appropriate Speaking Order which shall be communicated by the Concerned Department to the Agency as well as the Competent Authority whose Order has been appealed.

11. Circulation of the names of Agencies with whom Business Dealings have been banned

- 11.1 The Board shall upload/update the list of banned agencies along with the period of banning immediately on issue of the banning order on the Board's website as well as DPA Tenders website for wider circulation. Other Boards would check the list of banned Agencies before proceeding on tenders at their respective Boards. Boards having SAP/SRM system shall disable the banned vendors in SAP/SRM from issuance of further Enquiry/Purchase Order till the expiry of the banning period.
- 11.2 Depending upon the gravity of misconduct established, the Competent Authority may advise Head of Vigilance Department / HoD for circulating the names of Agency with whom business dealings have been banned, to the Government Departments, other Boards, Public Sector Enterprises, etc., for such action as they deem appropriate. The updated list of banned Agencies must be uploaded by Board on DPA Tenders website for wider circulation.

- 11.3 If Government Departments or a Public Sector Enterprise request for more information about the Agency with whom business dealings have been banned, a copy of the report of Investigating Department / Standing Banning Committee / DPA Board's Committee together with a copy of the order of the Competent Authority / Appellate Authority may be provided.
- 11.4 If business dealings with any Agency have been banned by the Central or State Government or any other Public Sector Enterprise, DPA may, on receipt of such information, without any further enquiry or investigation, issue an order banning business dealings with the Agency and its interconnected Agencies. In event of receipt of information, the procedure for banning in DPA will still have to be followed though no investigation will be called for, and the banning period proposed should be co-terminus with the period of banning in the organization which has issued the banning order but limited to the maximum period of banning as per the extant banning guidelines of DPA. On completion of the banning period as per DPA banning order, the Agency will be eligible for participating in any tenders in DPA irrespective of banning status in the other organization.
- 11.5 Based on the above, Departments / Divisions may take necessary action for implementation of the Guidelines for Banning of Business Dealings and same be made a part of the tender documents.

12. Saving

Any amendment to the guidelines shall require the approval of Chairman, DPA.

X-X-X-X