

**SYAMA PRASAD MOOKERJEE PORT, KOLKATA
(FORMERLY KOLKATA PORT TRUST)
HALDIA DOCK COMPLEX**



ENGINEERING DEPARTMENT INVITE E-TENDER

[Tender No. SDM(P&E)/T/06/2023-24]

**FOR
Supply, Delivery, Installation, Testing and
Commissioning of 33 kV/3.3 kV, 6MVA Transformers,
33 kV Panels and allied works for augmentation of
Master control sub-station at Coal Handling Plant of
HDC, SMPK.**

May - 2023

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[Tender No.: SDM(P&E)/T/06/2023-24]

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**SYAMA PRASAD MOOKERJEE PORT, KOLKATA
(FORMERLY KOLKATA PORT TRUST)
HALDIA DOCK COMPLEX**

SHORT E-TENDER NOTICE

Online E-Tender under single stage **two part system (Part-I: Prequalification & Techno-Commercial Bid and Part-II: Price Bid)** are invited as per Prequalification criteria stipulated in Tender Document for the following work at Haldia Dock Complex.

Name of work	:	Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6 MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.
E-tender No.	:	SDM(P&E)/T/06/2023-24
Estimated cost	:	Rs. 31,651,946.24 (excluding GST).
Date & time of pre-bid meeting (Off-line)	:	On 23.05.2023, 11:00 Hrs. (IST) onwards, at the Office of General Manager (Engineering); Jawahar Tower, Annex. Building, 1st Floor, Haldia Dock Complex, SMP, Kolkata, Dist. Purba Medinipur; PIN: 721 607; West Bengal; India.
Closing date & time of submission of e-Tender at https://kopt.enivida.in	:	07.06.2023 up to 15:00 Hrs. (IST).

For details of tender and any corrigendum / addendum, please visit

<http://eprocure.gov.in/epublish/app> of Central Public Procurement Portal, Government of India (only for view purpose).

Or

<https://kopt.enivida.in/> of e-Nivida's e-portal (for view and bidding purpose).

Or

<http://www.smpportkolkata.shipping.gov.in> of Syama Prasad Mookerjee Port, Kolkata (Formerly Kolkata Port Trust) {only for view purpose}.

However, intending bidder shall have to participate in bidding process through <https://kopt.enivida.in> only.

**General Manager (Engineering)
Haldia Dock Complex
SMP, Kolkata**

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

**SYAMA PRASAD MOOKERJEE PORT, KOLKATA
(FORMERLY KOLKATA PORT TRUST)
HALDIA DOCK COMPLEX**

NOTICE INVITING E-TENDER

(Tender No. SDM(P&E)/T/06/2023-24)

E-Tender, under single stage two part system [**Part-I:** Pre-qualification & Techno-commercial Bid and **Part - II:** Price Bid] are invited on behalf of Haldia Dock Complex (HDC), Syama Prasad Mookerjee Port, Kolkata (SMP Kolkata), from the intending bidders, fulfilling the “**Minimum Eligibility Criteria (MEC)**” and complying with the “**Other documents**” for the work of “Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK”.

MINIMUM ELIGIBILITY CRITERIA (MEC):

- 2.1.1** The average annual financial turnover of the bidder, during the last three (3) years, ending 31st March, 2022, must be at least **₹ 94,95,583.87** (Rupees Ninety Four Lakh Ninety Five Thousand Five Hundred Eighty Three and Paise Eighty Seven only). Auditor’s Report of the bidding firm, certified by Chartered Accountant (CA), for the years 2019-20, 2020-21 and 2021-22, including relevant Audited Balance Sheets and Profit & Loss Accounts, should be made available.

Note: The bidder should upload the scanned copies of Annual Financial Turnover Statement (certified by CA) for the years 2019-20, 2020-21 and 2021-22 along with Balance Sheets and Profit & Loss Accounts.

- 2.1.2** The bidders must have experience of having successfully completed “**Similar Works**” [defined below] during last seven (7) years, ending last day of month previous to the one in which tenders are invited, and the experience must be either of the following:-
- a) Three similar completed works, each of contract value not less than **₹ 1,26,60,778.49** (Rupees One Crore Twenty Six Lakhs Sixty Thousand Seven Hundred Seventy Eight and Paise Forty Nine only).
Or
 - b) Two similar completed works, each of contract value not less than **₹ 1,58,25,973.12** (Rupees One Crore Fifty Eight Lakhs Twenty Five Thousand Nine Hundred Seventy Three and Paise Twelve only).
Or
 - c) One similar completed work of contract value not less than **₹ 2,53,21,556.99** (Rs Two Crore Fifty Three Lakhs Twenty One Thousand Five Hundred Fifty Six and Paise Ninety Nine only).

The term “**Similar works**” mean firms having experience in 'Supply, Installation, Testing & Commissioning of HT Sub-station work of voltage grade 33 kV and above at Central Govt./State Govt./Port Sector/PSU or any reputed organization”.

Note: The bidder(s) will upload the scanned copies of work order(s) for similar works, successful completion certificates (with performance) from clients indicating the date of completion, value of work done, etc.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

2.2 DOCUMENTS

2.2.A. ESSENTIAL DOCUMENTS:

The bidder should also upload scanned copies of the following documents along with bids;

- a) Scanned copies of **Audited Balance Sheets and Profit & Loss Accounts for the years 2019-20, 2020-21 and 2021-22.**
- b) Scanned copies of work order(s) for similar works, successful completion certificates (with performance) from clients indicating the date of completion, value of work done, etc. **Work Experience as a sub-contractor or supply contractor shall not be considered as requisite qualification.**
- c) Scanned copy of **Power of Attorney (if applicable).**
- d) **Bid security declaration (as per given format in the tender document).**
- e) **Proof of Earnest Money Deposit, if not registered under MSME as detailed in the tender document.**

2.2. B. OTHER DOCUMENTS:

- i. Goods and Services Tax (GST) Registration Certificate, issued by Government of India.
- ii. Valid **Profession Tax Clearance Certificate (PTCC)** or Up-to-date **Profession Tax payment challan**, if applicable. If this is not applicable, the bidder must submit [upload] a declaration in this regard.
- iii. Certificate for allotment of Employees' Provident Fund (EPF) Code No. [Latest challan is to be submitted (uploaded)], if applicable. If this is not applicable, the Bidder should submit [upload] a declaration (in the form of Affidavit), in this regard.
- iv. Registration certificate of **Employees' State Insurance (ESI)** authority, if applicable.
- v. If this is not applicable, necessary document(s) [to establish Non-applicability], along with **affidavit, affirmed before a first-class Judicial Magistrate** to that effect, are to be submitted [uploaded]. Moreover, such bidder(s) shall have to submit a declaration, confirming that they will obtain registration certificate of ESI authority, if required, and they will indemnify **Syama Prasad Mookerjee Port, Kolkata** against all damages & accident occurring to their labours (including that of sub-contractor's labours), in connection with the instant contract, in case they become a Successful Bidder.
- vi. PAN Card, issued by Income Tax Department, Government of India.
- vii. Certificate of **MSEs registered with NSIC under Single Point Registration scheme/DIC/MSME Udyog Aadhar, if applicable.**
- viii. **Integrity Pact, duly filled up, signed and stamped.**

2.3 The bidders are required to submit bid as per the instructions of the instant bidding documents (including Notice Inviting e-Tender). Bid will be considered rejected if any of the essential documents as mentioned in Clause no. 2.2.A is not submitted by the bidder. Essential documents mean papers related to "Minimum Eligibility Criteria (MEC)", including Bid Document fee, Bid security declaration and Power of Attorney.

2.4 AVAILABILITY OF THE BIDDING DOCUMENTS:

The bidding documents (in full) would be available in the following websites:-

- <https://kopt.enivida.in> of RailTel Portal.
- <http://eprocure.gov.in/epublish/app> of Central Public Procurement Portal, Government of India
- <http://www.smpportkolkata.shipping.gov.in> of SMP Kolkata [FORMERLY KOLKATA PORT TRUST].

Corrigenda, Addenda, Queries & Clarifications, if any, would also be available in the aforesaid websites.

2.5 PARTICIPATING IN THE BIDDING PROCESS:

The bidders will have to participate in the electronic bidding process through the website of E-Nivida(<https://kopt.enivida.in>) only.

**General Manager (Engineering)
Haldia Dock Complex,
SMP, Kolkata**

SCHEDULE OF TENDER (SOT)

(Tender No. SDM(P&E)/T/06/2023-24)

3.1.	Name of work	::	Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.
3.2.	Tender Inviting Authority	::	General Manager (Engineering), Haldia Dock Complex, SMP, Kolkata
3.3.	Mode of Tender	::	e-Procurement System. Online (Pre-qualification, Techno-commercial Bid and Price Bid, in two parts- Par-I- Techno-commercial Bid and Part-II: Price Bid) through https://kopt.enivida.in of E- NIVIDA No physical tender is acceptable by Haldia Dock Complex, SMP, Kolkata.
3.4.	Estimated Cost	::	Rs. 3,16,51,946.24 (excluding GST).
3.5.	i) Bid Document Fee (Cost of bidding documents)	::	<p>The intending bidders should deposit Rs 2,950.00 (Indian Rupees: Two Thousand nine hundred and fifty) only [including GST @ 18%], as Bid document Fee (non-refundable), to Haldia Dock Complex.</p> <p>Bid Document Fee (Cost of bidding document) may be paid on following mode:</p> <p>a) Through DD/Banker's Cheque: in favour of "Syama Prasad Mookerjee Port, Kolkata, Haldia Dock Complex" on any Scheduled/Nationalized Bank payable at Haldia and it should be submitted physically as specified in the Tender Document.</p> <p>Copy of the DD/Banker's Cheque should be uploaded during submitting online bid.</p> <p style="text-align: center;">OR</p> <p>b) Through E-payment gateway: by using Debit / Credit Card or Net Banking/eWallet/UPI option for e-Payment mode. Bidder has to select the payment option as "e-payment" to pay the tender fee as applicable and enter details of the instrument.</p> <p>Note: Without Bid Document Fees, offer of the bidder will be summarily rejected. In case the aforesaid Bid Document fee [non-refundable] is not deposited by the Bidder, the respective bid will be summarily rejected, treating the same as non-responsive.</p>

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

	ii) RailTel Tender Processing Fee(Non refundable)	<p>a. Mode of Payment:- E-payment Only through Debit / CreditCard or Net Banking.</p> <p>b. Tender Processing Fee (TPF)- 0.1% of estimate cost (Minimum 750/- and Maximum 7500/-) plus GST @ 18%.</p> <p>c. Registration Charges: Rs. 2000/- + Applicable GST Per Year.</p> <p>Note:</p> <p>1. The bidders, who are not yet registered with RailTel, are advised to get themselves registered with RailTel, at least 72 (seventy two) hours prior to bid submission.</p> <p>2. Bidders are required to ensure that their corporate email id provided is valid and updated at the stage of registration of vendor with RailTel's e-Nivida Portal (i.e. Service Provider).</p>
	iii) Earnest Money Deposit (EMD)	<p>:: Rs 6,33,039.00 (Rupees Six lakhs Thirty Three thousand Thirty Nine) only.</p> <p>Earnest Money Deposit (EMD) may be paid on following mode:</p> <p>a) Through DD/Banker Cheque: in favour of "Syama Prasad Mookerjee Port, Kolkata, Haldia Dock Complex" on any Scheduled/Nationalized Bank payable at Haldia and it should be submitted physically as specified in the Tender Document. Copy of the DD/Banker's Cheque should be uploaded during submitting online bid.</p> <p style="text-align: center;">OR</p> <p>b) Through E-payment gateway: by using Debit / Credit Card or Net Banking/eWallet/UPI option for e-Payment mode. Bidder has to select the payment option as "e-payment" to pay the EMD as applicable and enter details of the instrument.</p> <p>Note: If, the aforesaid Earnest Money is not deposited by the Bidder, the respective bid will be summarily rejected, treating the same as non-responsive.</p>

			<p>NOTE :</p> <p>i) For exemption of Bid Document Fee (Cost of bidding documents) and Earnest Money Deposit (EMD) :- Bidders to upload the scanned copy of the certificate from MSME / Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC) under single point registration / Aadhar Udyog or any empowered Central / State Govt. authority is required in electronic format. But all MSEs registered with NSIC /DIC are not exempted from depositing cost of tender document. Only those firms, having documents of such exemption for the whole tender work (as per Scope of Work and Technical Specifications) will be exempted. Documentary evidence must be submitted in techno-commercial part of Tender for claim of such exemption, failing which their tender would be summarily rejected.</p> <p>ii) Bid Document Fee and EMD are to be deposited physically at the office of the Sr. Dy. Manager, Plant & Equipment Division, 1st floor at Operational Administrative Building of Haldia Dock Complex, Chiranjibpur, Haldia, PIN 721607, separately in a single sealed envelope, mentioning Tender no. with proper marking.</p> <p>Cost of bid document fee & EMD, should be submitted/deposited on any scheduled/ nationalized Bank, by the bidder before submission of the tender, as specified in the Tender Document.</p>
3.6.	Bid Validity	::	120 days.
3.7.	Performance Bank Guarantee / Security Deposit	::	3% of the Contract Value (excluding GST) in the form of Bank Guarantee.
3.8.	Completion Period	::	12 (Twelve) months from the date of issue of Letter of Acceptance (LOA) [i.e.award of contract].
3.9.	i) Pre- Bid queries (on-line).	::	Any queries regarding subject tender may be forwarded to himam.hdc@kolkataporttrust.gov.in within 22/05/2023, 17:00 Hrs. (IST). Any queries, received after aforementioned date & time, will not be considered by HDC.
	ii) Date, time and venue of Pre-Bid Meeting (off-line).		23/05/2023, 11:00 Hrs. (IST) onwards, at the Office of General Manager (Engineering); Jawahar Tower, Annex. Building, 1st Floor, Haldia Dock Complex, SMP, Kolkata, Dist. Purba Medinipur; PIN: 721 607; West Bengal; India.

3.10	i) Starting date of submission of e-Tender at https://kopt.enivida.in	::	15/05/2023
	ii) Closing date & time of submission of e-Tender at https://kopt.enivida.in	::	07/06/2023 up to 15:00 Hrs. (IST).
	iii) Date & time of opening Part-I (Prequalification & Techno-commercial Bid).	::	07/06/2023, 15:30 Hrs. (IST) onwards.
	iv) Date & time of opening of Part-II (Price Bid).	::	To be intimated later on, to the techno-commercially qualified bidders only.
3.11.	Address of the Employer	::	Syama Prasad Mookerjee Port, Kolkata (FORMERLY KOLKATA PORT TRUST) 15, Strand Road, Kolkata – 700 001, West Bengal, India.
3.12.	Address of Engineer	::	General Manager (Engineering), Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata. Address: Engineering Department Jawahar Tower Complex ; P.O. Haldia Township; Dist. Purba Medinipur ; PIN: –721607, West Bengal, India. Telephone no. : + 91-3224-264496 E. mail: aganesan.hdc@kolkataporttrust.gov.in
3.13.	Address of the Engineer's representative	::	Mr. S. S. K. Hassan Imam Designation : Dy. Manager (P&E), Operational Administrative Building (1 st floor), SMP, Kolkata, Haldia Dock Complex, Chiranjibpur; P.O: Haldia; Dist. Purba Medinipur; PIN: 721 604; West Bengal; India. Mobile no.: + 91 94340 31346 E.mail: himam.hdc@kolkataporttrust.gov.in

General Manager (Engineering)
Haldia Dock Complex
Syama Prasad Mookerjee Port, Kolkata

SECTION – IV

Important instructions for E-procurement

4.1 Introduction:

- 4.1.1 Bidders are requested to use internet Browsers Firefox version below 50 / InternetExplorer version 8 or above, and Java 8 Update 151 or161.**
- 4.1.2 Further, bidders are requested to go through the following information and instructions available on the RailTel Portal <https://kopt.enivida.in> before responding to this e-tender:**
- Bidders Manual Kit
 - Help for Contractors
 - FAQ

Contact person (Haldia Dock Complex):

- (i) Shri S. S. K. H. Imam
Designation: Dy. Manager (P&E),
Mobile No.: + 91 94340 31346
E-mail : himam.hdc@kolkataporttrust.gov.in.
- (ii) Shri B. N. Manna
Designation: Asstt. Manager (P&E),
Mobile No.: + 91 8945534410
E-mail : bnmanna.hdc@kolkataporttrust.gov.in.

Contact persons (RailTel Portal):

Mr. Navneet Mishra.
Mobile No.: + 91 9355030630
E-mail : eprochelpdesk.17@gmail.com

Mr. Tariq Anwar
Mobile No.: +91 9355030608
E-mail : eprochelpdesk.35@gmail.com

(i) See RailTel Portal for contact details.

- 4.2 4.2.1** All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
- 4.2.2** E-tender cannot be accessed after the due date and time mentioned in NIT. The process involves Electronic Bidding for submission of Tender Document Fee , Techno- Commercial Bid as well as Price Bid.
- 4.2.3** SMP, Kolkata reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
- 4.2.4** Any order resulting from this tender shall be governed by the terms and conditions mentioned therein.
- 4.2.5** No deviation to the technical and commercial terms & conditions are allowed.
- 4.2.6** The bidders must upload all the documents required as per terms of tender. Any other document uploaded which is not required as per the terms of the tender shall not be considered.
- 4.2.7** The bid will be evaluated based on the filled-in technical & commercial formats. Price bid must be filled-up in EXCEL Sheet through RAILTEL PORTAL (which is uploaded by SMP, Kolkata).

- 4.2.8** Bidder has fully read and understood the entire Tender Document, GCC, Corrigendum and Addenda, if any downloaded from under the instant e-tender and no other source, and will comply to the said document, GCC, Corrigendum and Addenda".
A declaration in this regard is to be made by the bidder.
- 4.2.9** (A) Tender will be opened electronically on specified date and time as mentioned in the NIT. Bidders can witness electronic opening of Bid.
- (B) Necessary addendum/corrigendum (if any) of the tender would only be hoisted in the E-NIVIDA portal.
- (C) Bid document Fee / [Exemption of Bid document Fee](#) should reach this office physically before opening of Tender document, failing which techno-commercial bid will not be opened.
- (D) Bid document Fee / [Exemption of Bid document Fee](#) details are to be treated as essential documents should be uploaded with the other essential documents.
- 4.3 Instructions related to Micro & Small Enterprises(MSEs):**
- 4.3.1** **MSEs registered with NSIC under Single Point Registration scheme/DIC are exempted from depositing Tender Fee. But all the NSIC/DIC registered firms are not exempted from depositing Tender Fee. Only those firms, having documents of such exemption for the entire tendered work (as per the Bill of Quantity) would be exempted. Documentary evidence must be uploaded for claim of such exemption, failing which their tender would summarily be rejected.**
- 4.3.2** When splitting of tender quantity is not possible purely on technical ground, Trustees reserve the right not to negotiate price with MSE if their price is within the band of L1+15% in comparison with L1 price of non-MSE for consideration of award of order for 20% of tender quantity against any item as per new public procurement policy.
- 4.3.3** If **Micro & Small Enterprises (MSEs), NSIC under Single Point Registration scheme/DIC** intend to participate with respect to items for which they are not registered with NSIC, then they will have to deposit full amount of **Bid Document Fee**, in accordance with the **Schedule of Tender (SoT)**. Otherwise, their offer with respect to such items (for which they are not registered with NSIC) will not be considered.
- 4.4 Other Instructions related to e-Procurement:**
- 4.4.1** All notices and correspondence with the bidder(s) shall be sent by e-mail only during the process till finalization of tender by HDC, SMP Kolkata. Hence, the intending bidders are required to ensure that their e-mail IDs provided are valid and updated at the stage of registration of bidders with E-NIVIDA (i.e., Service Provider). The intending bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).
- 4.4.2** In all cases, an intending bidder should use their own ID and Password, along with Digital Signature, at the time of submission of their bid. It is mandatory that all bids are submitted with Digital Signature Certificate (DSC), otherwise the same will not be accepted by the system.
- 4.4.3** Addenda, Corrigenda and Queries & Clarifications (with respect to the instant e-Tender), if any, would be hosted in the e-Procurement portal of E-NIVIDA.
Since there is no provision to take out the list of intending bidders downloading the bidding documents from the websites mentioned in the Tender Notice, the intending bidders are requested to check the website of E-NIVIDA to ensure that they have not missed any Addenda, Corrigenda and Queries & Clarifications, uploaded against the instant e-Tender, after downloading the bidding documents. The responsibility of downloading such Addenda, Corrigenda and Queries & Clarifications, if any, will be that of the intending bidders.

- 4.4.4** No deviation/variation of the techno-commercial terms and conditions of the bidding documents will be considered by HDC, SMP Kolkata. Submission of bid in the e-Tender platform by any bidder confirms their acceptance of the techno-commercial terms and conditions of the bidding documents.
- 4.4.5** HDC, SMP Kolkata reserves the right to accept or reject any bid (in full or part) and to annul the bidding process and to reject all bids, at any time prior to contract award, without assigning any reason thereof and without thereby incurring any liability to the bidders.
- 4.4.6** Any order resulting from this open e-Tender shall be governed by the terms and conditions mentioned therein.
- 4.4.7** All electronic bids submitted during the e-Tender process shall be legally binding on the bidders. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by HDC, SMP Kolkata will form a binding contract, between HDC, SMP Kolkata and the bidder, for execution of the work. Such successful bidder shall be called hereafter the 'CONTRACTOR'.
- 4.4.8** The bids will be evaluated based on the filled-in Technical & Commercial formats and the requisite documents submitted (uploaded) by the bidders.
- 4.4.9** The documents uploaded by bidder(s) will be scrutinized. During scrutiny, in case any of the information furnished by the bidder is found to be false, Earnest Money Deposit of such defaulting bidder(s) will be forfeited. Punitive action, including suspension and banning of business, can also be taken against such defaulting bidder(s).
- 4.4.10** HDC, SMP Kolkata, at its discretion, may extend the closing date & time of e-Tender, prior to the closing date & time of e-Tender mentioned in the Schedule of Tender (SoT). However, the closing date & time of e-Tender will not be extended, under any situation, after the due date is over.
- 4.5 Opening of Bid [Pre-qualification & Techno-commercial Bid and Price Bid]:**
- 4.5.1** **Part I (Pre-qualification & Techno-commercial Bid)** will be opened electronically on specified date and time, as given in the Schedule of Tender (SoT). Bidder(s) can witness electronic opening of bid(s).
- 4.5.2** **Part II (Price Bid)** will be opened electronically of only those bidder(s), who qualify (ies) in the "Pre-qualification & Techno-commercial Bid" [Part I]. Such bidder(s) will be intimated date of opening of Part II (Price Bid), through e-mail, to valid e-mail ID(s) confirmed by them.
- 4.6 RailTel Tender Processing Fee (Non refundable)**
- Mode of Payment:-** E-payment Only through Debit/Credit Card or Net Banking. Tender Processing Fee(TPF)- 0.1% of estimate cost (Minimum 750/- and Maximum 7500/-) plus GST @18%.
- Registration Charges:** Rs. 2000/- + Applicable GST Per Year.
- Note:**
- The bidders, who are not yet registered with RailTel, are advised to get themselves registered with RailTel, at least 72 (seventy-single) hours prior to bid submission.
- Bidders are required to ensure that their corporate email id provided is valid and updated at the stage of registration of vendor with RailTel's e-Nivida Portal (i.e. Service Provider).**

SECTION-V

INSTRUCTIONS TO BIDDERS (ITB)

A. GENERAL

5.1 Definition and interpretations:

- (a) the term “in writing” means communicated in written form (i.e. by mail, e-mail, fax, telex, etc.) and delivered against receipt;
- (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular;
- (c) “day” means calendar day; and
- (d) “Procurement” means the entire work requirements, as specified in.

5.2 Fraud and corruption

5.2.1 It is the policy of **SMP Kolkata (erstwhile KoPT)** to require that bidders, Contractors, Sub-contractors, and Consultants, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, **SMP Kolkata:**

- (a) defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) “**corrupt practice**” means the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution;
 - (ii) “**fraudulent practice**” means a misrepresentation or omission of facts, in order to influence a public procurement process or the execution of a contract;
 - (iii) “**collusive practice**” means a scheme or arrangement between single or more bidders, designed to establish Bid Prices at artificial , non competitive levels;
and
 - (iv) “**coercive practice**” means harming, or threatening to harm, directly or indirectly, persons or their property to influence their participation in procurement process or affect the execution of a contract;
- (b) will reject a proposal for award, if it determines that the bidder, recommended for award, has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract in question;
- (c) Will terminate contract, if it determines at any time that representatives of SMP Kolkata engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract;
- (d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract;
and
- (e) will have the right to require that a provision be included in Bidding Documents and in contracts, requiring bidders, contractors , subcontractors, and consultants to permit

SMP Kolkata to inspect their accounts and records and other documents relating to the bid submission and contract performance.

5.2.2 Furthermore, bidders shall be aware of the provision stated in GCC.

5.3 Eligible bidders

5.3.1 A Bidder, and all parties constituting the Bidder, **should have the nationality of any country**. A Bidder shall be deemed to have nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered and operates in conformity with the provisions of the laws of the country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or contractors for any part of the contract, including related services

5.3.2 A Bidder shall not have a conflict of interest. Any Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to have a conflict of interest for the purpose of this bidding process, if the Bidder and one or more parties:

(a) Submit more than one bid in this bidding process.

Or

(b) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by **SMP Kolkata** to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under the instant Bidding Documents.

5.3.3 Participating by a Bidder in more than one bid shall result in the disqualification of all bids, in which such Bidder is involved.

5.3.4 A Bidder that is under a declaration of ineligibility by **SMP Kolkata**, in accordance with **ITB Clause No.5.2**, at the date of contract award shall be disqualified.

5.4 Authority in signing the bid /offer

5.4.1 In case the bid is submitted by a **Proprietorship Firm**, the same should be signed either by the **Proprietor** or other person(s), holding a valid **power of attorney / authorisation** from the proprietor, in connection with this bidding process. The signature of such power of attorney holder(s) / authorised person(s) should be attested by the proprietor. Such **power of attorney / authorisation** should be uploaded along with **Techno- commercial Bid [Part I]**.

5.4.2 In case the bid is submitted by a **Partnership Firm**, the same should be signed either by the partner(s), holding valid **power of attorney** from the partners or other person(s), holding valid **authorisation** from such power of attorney holder(s), subject to approval of the partner(s) in the matter of giving such authorization, in connection with this bid. The signature of such **power of attorney holder(s) / authorised person(s)** should be attested by the **partners or power of attorney holder**, as the case may be. Such **power of attorney / authorisation** should be uploaded along with **Techno- commercial Bid**.

5.4.3 In case the bid is submitted by a **Limited Company**, the same should be signed by the person(s) holding valid **power of attorney / authorisation**, executed in his / their favour (in connection with this bid) and the signature of such **power of attorney holder(s) / authorised person(s)** should also be attested, in accordance with the constitution of the Limited Company. Such **power of attorney / authorisation** should be uploaded along with **Techno- commercial Bid**.

5.4.4 Such **power of attorney holder(s) / authorised person(s)** should put his / their signature identical with the attested one, in the relevant documents submitted /

uploaded, in connection with the instant bidding process [including “**Techno-commercial Bid**”]. In case of putting different signatures in different documents / offers, all such signatures should be attested by the same person in line with the above.

B. CONTENTS OF BIDDING DOCUMENTS

5.5 Sections of Bidding Documents

- 5.5.1** The contents of the **Bidding Documents** as detailed at “TABLE OF CONTENTS” should be read in conjunction with any addendum / corrigendum issued in accordance with **ITB Clause No.5.7**.
- 5.5.2** The Employer (SMP Kolkata) is not responsible for the completeness or correctness of the bidding documents and their Addenda, if they were not obtained directly from the source indicated in Notice Inviting e-Tender.
- 5.5.3** The bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Documents. Failure to furnish all information or documentation required by the Bidding Documents [considering all addenda / corrigenda issued] may result in the rejection of the bid.

5.6 Pre-Bid Meeting

- 5.6.1** A prospective bidder requiring any clarification of the instant Bidding Documents shall contact **Sr. Dy. Manager (P&E), HDC**, in writing, or raise their enquiries during the **Pre-bid meeting**.
- The **prospective bidders** are requested to submit their queries / observations / suggestions / requests for clarification, in connection with the instant Bidding Documents, in advance, to enable **SMP Kolkata** to prepare response / clarifications and make pre-bid meeting meaningful.
- 5.6.2** As indicated in the Schedule of Tender, pre-bid meeting will be conducted off-line on behalf of HDC, SMP Kolkata. The purpose of this pre-bid meeting will be to clarify issues and to answer questions on any matter (in connection with the instant Bidding Documents only) that may be raised at that stage. Authorised representative(s) of the prospective bidders will be allowed to attend the **Pre-bid meeting**, which will be held on the date, time & at the venue stipulated in the **Schedule of Tender (SOT)**.
- The **designated representative(s)**, who will be deputed to attend the **pre-bid meeting**, should submit their authorization in this regard. The signature of such designated person(s) should be attested by the authorized signatory of the prospective bidders. Otherwise, the designated person should have to submit the proof of his identity through other means.
- 5.6.3** The prospective bidders are advised to attend the pre-bid meeting. However, non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.
- 5.6.4** Unless otherwise notified, **all the queries / observations / suggestions / requests for clarification** (related to the instant Bidding Documents only) [including the **queries / observations / suggestions / requests for clarification raised during pre-bid meeting**], received till the date of **pre-bid meeting**, will be considered. **SMP Kolkata’s** response / clarifications (including description of queries / observations / suggestions / requests for clarifications, but without

identifying its source), in this regard, will be communicated to all the known prospective bidders (i.e. who would **attend pre-bid meeting** or **submit queries / observations / suggestions** or **requested for clarification**, in writing, well in advance to the last date of submission of bids). The aforesaid **queries / observations / suggestions / requests for clarification** and **SMP Kolkata's** response / clarifications will also be hosted in the websites, as specified in the **Notice Inviting e- Tender**.

Any modification to the Bidding Documents, which may become necessary as a result of the **SMP Kolkata's response / clarifications**, so issued, shall be made through the issue of an addendum / corrigendum, pursuant to **ITB**.

- 5.6.5** The Bidder shall be deemed to have **examined** thoroughly the instant Bidding Documents, in full, [considering all addenda / corrigenda issued (if any)], **visited the site & surroundings** and to have **obtained all necessary information in all the matters** whatsoever that might influence while carrying out the job as per the conditions of the instant **Bidding Documents** [considering all addenda / corrigenda issued (if any)] and to satisfy themselves to sufficiency of their bid, etc. If they shall have any issue to be clarified, the same should be brought to the notice of **SMP Kolkata**, in writing, as set out in **ITB**.

The bidders are advised to acquaint themselves with the job involved at the site, like technical scope of work, availability of labour, means of transport, communication facilities, laws and bye laws in force from Government of West Bengal & Government of India and other statutory bodies from time to time. The Bidder shall be deemed to have examined and collected all necessary information as to risk, contingencies and other circumstances, which may be necessary for preparing the Bid. Visiting the site shall be at the bidder's own expense. Failure to visit to site will no way relieve the Contractor (successful Bidder) of any of their obligation in performing the work and liabilities & responsibilities thereof, in accordance of the contract.

- 5.6.6** Necessary Gate Pass/Dock Entry Permit, for entering into the Dock area, will be issued to the designated representative(s) of the prospective bidders, on chargeable basis [as per the extant "Scale of Rates" of SMP Kolkata, available at <http://www.smpportkolkata.shipping.gov.in/> of SMP Kolkata (Formerly Kolkata Port Trust)], to visit the site, for the purpose of inspection only, on receipt of a formal written request. The signature of such designated person(s) should be attested by the authorized signatory of the prospective bidders. Otherwise, the designated person(s) should have to submit proof of his/their identity through other means.

However, during the pre-bid meeting, if the prospective bidders are willing to enter into the dock area, they will be allowed through VIP Pass of HDC free of cost.

Such prospective bidder will be fully responsible for any injury (whether fatal or otherwise) to its designated representative(s), for any loss or damage to property, or for any other loss, damage, costs and expenses whatsoever caused, which, but for the granting of such permission, would not have arisen.

The prospective bidder will be liable to indemnify SMP Kolkata against any loss or damage to the property of SMP Kolkata or neighboring property which may be caused due to any act of prospective bidder or their designated representative(s).

5.7 Amendment of Bidding Documents

- 5.7.1 At any time, prior to the last date for submission of bids, **SMP Kolkata** may, for any reason whether at its own initiative or in response to the **queries / observations / suggestions/ requests for clarification**, amend and modify the bidding documents by issuing Addenda/Corrigenda. Such Addenda /Corrigenda will be hosted in the websites, as specified in the **Notice Inviting e-Tender**.
- 5.7.2 Any Addendum/Corrigendum, thus issued, shall be part of the bidding documents and shall be communicated, in writing, to all the known prospective bidders (i.e. who would attend Pre-bid Meeting or submit queries / observations / suggestions or request for clarification), in writing, well in advance to the last date of submission of bids.
- 5.7.3 To give prospective bidders reasonable time to take the Addendum / Corrigendum into account in preparing their bids, SMP Kolkata may, at their discretion, extend the last date for submission of the bids, prior to the closing date & time of e-Tendering.

C. PREPARATION OF BIDS

5.8 Cost of bidding

The Bidder shall bear all costs associated with the preparation and submission of their bid, and **SMP Kolkata** shall not be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

5.9 Language of Bid

The Bid, as well as all correspondence and documents relating to the bid, exchanged by the Bidder and SMP Kolkata, shall be written in the **English language only**. If the supporting documents and printed literature, that are part of the bid, are in another language, they must be accompanied by an accurate translation of the relevant passages in the English language, in which case, for purposes of interpretation of the bid, such translation shall govern.

5.10 Documents comprising the Bid

5.10.1 The Bid shall comprise of the following:-

(a) Pre-qualification and Techno-commercial Bid (Part-I):

The Pre-qualification & Techno-commercial Bid comprises all documents [including the Bidding Forms (provided in these bidding documents), duly filled in, signed and stamped] required to be submitted as per the Notice Inviting e-Tender, Schedule of Tender (SOT), Instructions To Bidders (ITB) and any other relevant clause(s) of these bidding documents.

(b) Price Bid (Part-II):

The Price Bid comprises the prices only and the same are to be submitted electronically, through the website of <https://kopt.enivida.in> only.

5.11 Form of Tender

The bidder shall have to submit (upload) the “**FORM OF TENDER**”. This form **must be completed without any alterations** to its format, and no **substitutes shall be accepted**. All blank spaces shall be filled in with the information requested. Such **duly filled in “FORM OF TENDER”** should be uploaded.

5.12 Price Schedule

5.12.1 The Bidder shall quote their price on-line (**through RailTel Portal only**) as per the **Price**

Schedule (Bill of Quantities) in the Price bid (**Part-II**), without any condition or deviation. Price indicated anywhere else, in any other form or manner, will not be considered for evaluation of Price Bid.

- 5.12.2 The Bidder should submit(upload)the **unpriced** format [Bidding Form VI : **PRICE SCHEDULE**], of the instant Bidding Documents, duly filled in with the GST rates at appropriate places and signed & stamped as token of acceptance.

5.13 Bid Prices

- 5.13.1 The prices are to be quoted by the Bidder **through RailTel Portal**, considering the work requirements, as detailed in **Section VI (Scope of Work)** and other terms & conditions of the Bidding Documents (considering all addenda / corrigenda issued).
- 5.13.2 Except where otherwise expressly provided, the contractor shall have to provide all materials, labour, plant and other things necessary in connection with the contract, although everything may not be fully specified, and although there may be errors and omissions in the specifications.
- 5.13.3 The prices and rates entered (electronically through RailTel Portal) **as per the Price Schedule** (Bill of Quantities), in the Price bid (**Part-II**), by the **Bidder**, shall include, inter alia, all costs and expenses involved in or arising out of the following:
- (a) Supply, delivery, inspection, transportation (including insurance), handling, receipt and storage of all required materials [in line with Scope of Work (Section VI)] and equipment at site.
 - (b) The provision, storage, transport, handling, use, distribution & maintenance of all materials, equipment, machinery and tools, including all costs, charges, dues, demurrage or other outlays involved in transportation.
 - (c) The provisions & maintenance of all their staff & labour and their payment, accommodation, transport, fares and other requirements.
 - (d) All required first aid, welfare and safety requirements.
 - (e) Damage caused to the work and /or construction, plant, materials and consumable stores caused by weather.
- 5.13.4 Tools, Tackles, lifting machineries, scaffolding, temporary lighting, different vehicular transport etc. required for execution of the whole work will have to be arranged by the Contractor, at their own risk, cost & arrangement, which may be considered, while submitting their rates in the offer.
- 5.13.5 Rates & amounts quoted by the bidders in the “PRICE SCHEDULE”, include all incidental charges [excluding Goods and Services Tax (GST)], as applicable, and charges for packing, forwarding, loading, handling, carrying to any lead, stacking, transportation, permits, overheads & profit, etc. necessary for the complete services as described in this Bidding Document.

GST, as applicable, shall be paid extra against proper invoice submitted by the Contractor.

The contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable SMP Kolkata to get due credit against GST paid.

In case of any failure on the above account, GST amount, even if paid by SMP

Kolkata, shall be recoverable from the Contractor.

- 5.13.6** All quoted rates will remain firm during the validity period of the bid / offer, including any / all extension thereof, agreed by the bidder.

However, changes **in statutory taxes & duties [other than GST] will be adjusted** (within the scheduled completion period), based on documentary evidence.

- 5.13.7** The Bidder should clearly understand that they shall be strictly required to conform to all terms & conditions of the instant Bidding Documents [considering all addenda / corrigenda (if any) issued], as contained in each of its clauses and **plea of “Customs Prevailing”** will not be, in any case, admitted as excuse on their part, for infringing any of the terms & conditions.

No request for change or variation in rates or terms & conditions of the contract shall be entertained on the ground that the successful Bidder has not understood the work envisaged in the instant contract.

5.14 Currencies of Bid

The **Bidders** should quote the prices in **Indian Rupees (Rs)** only.

5.15 Period of validity of bids

- 5.15.1** Bids shall remain valid for the period of **120 days** after the bid submission deadline date (considering extension thereof, if any) as prescribed in **ITB**. A bid, valid for a shorter period, shall be rejected by **SMP, Kolkata**, treating the same as non-responsive.

- 5.15.2** In exceptional circumstances, prior to the expiration of the bid validity period, **SMP Kolkata** may request the bidders to extend the period of validity of their bids. The request and the responses shall be made in writing.

A Bidder granting the request shall not be required or permitted to modify its bid, except when option to do the same has been specifically granted by **SMPKolkata**, in writing.

5.16 Earnest Money Deposit (EMD):

Earnest money and cost of tender document, as indicated in **SOT**, are to be physically deposited at the office of Tender Inviting Authority (Sr. Dy. Manager, Plant & Equipment Division), 1st floor at Operational Administrative Building of Haldia Dock Complex, Chiranjibpur, Haldia, PIN 721607, separately in a single sealed envelope, mentioning Tender no. with proper marking.

Or

Through E-payment gateway: by using Debit / Credit Card or Net Banking/eWallet/UPI option for e-Payment mode. Bidder has to select the payment option as “e-payment” to pay the EMD as applicable and enter details of the instrument.

- 5.16.1 The intending bidders should deposit an amount specified in the Schedule of Tender (SOT), as Earnest Money Deposit (EMD), in accordance with the procedure mentioned therein.**

- 5.16.2 Failing to deposit the Earnest Money, in accordance with ITB, the bid shall be rejected by the Employer (SMP Kolkata), treating the same as nonresponsive. For exemption of EMD, the bidder is required to upload the scanned copy of the certificate from MSME / Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC) or any**

empowered Central / State Govt. authority.

5.16.3 Refund of Earnest Money Deposit:

Earnest Money Deposit of the successful bidder shall be retained by SMP Kolkata and Earnest Money Deposit of the unsuccessful bidders [including the bidder(s) whose Price Bid would not be opened in line with **ITB**] shall be refunded, without interest, within 2 (single) months from the date of opening of Price Bids or on finalization/acceptance of tender, whichever is earlier.

In case the bid of the **successful bidder** is found acceptable to **SMP Kolkata** and contract is awarded with them, the **Earnest Money Deposit** of the **successful bidder (Contractor)** shall be retained by **SMP Kolkata** till submission of **Performance Guarantee / Security Deposit** (in accordance with **ITB**) and signing of the **Contract Agreement** by **SMP Kolkata** and the Contractor (in accordance with **ITB**), and shall be refunded thereafter.

In case, the successful bid is not found acceptable to SMP Kolkata, Earnest Money Deposit of the successful bidder shall be refunded after the decision, in this regard, is finalized by SMP Kolkata.

The respective bidders who have deposited earnest money or bid document fee in DD/Cheque, they have to collect Treasury Receipts, issued against Earnest Money Deposit/bid document fee, from Treasury Office of Finance Division of HDC, SMP, Kolkata, at Jawahar Tower Building, Haldia Township-721607 and during refund original receipt is to be submitted along with refund application.

In case of bidders who have made payment against earnest money or bid document fee through online, they have to request for refund through online by submitting documentary evidence against such payment.

5.16.4 No interest shall be payable on the account of Earnest Money Deposit in any case.

5.16.5 Forfeiture of Earnest Money Deposit:

The EMD may be forfeited

- (a) if a Bidder withdraws their offer within the validity period of the bid / offer; and / or, alters / amends any terms and / or condition and / or quoted rate(s), within the validity period of the offer (excepting when option to do the same has been specifically granted by Kolkata Port Trust, Haldia Dock Complex in writing) making it unacceptable to the Kolkata Port Trust, Haldia Dock Complex;
or,
- (b) if the successful bidder,
 - i) fails to submit the Performance Guarantee / Security Deposit (as per SCC) for the specified sum and in the specified form, within the stipulated time;
and / or,
 - ii) fails to carry out the work or to perform / observe any of the conditions of the contract, For the purpose of this provision, the validity period (of the bid /

offer) shall include any / all extension thereof, agreed by the Bidder in writing.

SMP Kolkata shall also be at liberty to deduct any of their dues from Earnest Money. It should however be clearly understood that in case of any default in any terms and or condition of the contract after placement of order but before submission of Performance Guarantee / Security Deposit (as per SCC), the same shall be dealt with in accordance with the relevant provisions of contract, including forfeiture of Earnest Money.

Demand **Draft / Banker's Cheque** against cost of bid document fee & EMD, should be submitted/deposited on any scheduled/ nationalized Bank, by the bidder in favour of Syama Prasad Mookerjee Port, Kolkata, Haldia Dock Complex payable at Haldia, **before opening of the tender, as specified in the Tender Document.**

5.16.6 Details of cost of e-tender paper remitted should be entered by the participating bidder in the space provided in the e-tender as indicated hereunder:

- a) Name of remitting bidder :
- b) Tender No. :
- c) Amount remitted :
- d) Date of remittance:
- e) DD/BC No. :

5.16.7 Details of Earnest money remitted should be entered by the participating vendor/contractor in the space provided in the e-tender as indicated hereunder:

- a) Name of remitting bidder :
- b) Tender No. :
- c) Amount remitted :
- d) Date of remittance :
- e) DD/BC No. :

Tender submitted without requisite Earnest Money and cost of tender paper will be liable for rejection.

A. SUBMISSION OF BIDS AND OPENING OF BIDS (INCLUDING PRICEBID)

5.17 Submission of bids

- 5.17.1** Bidders shall have to submit their bids [both **Pre-qualification & Techno-commercial Bid (Part-I)** and **Price Bid (Part-II)**] on-line through **RailTel Portal only.**
- 5.17.2** The Bidder should submit (upload) the scanned copies of all the relevant and required documents, statements, filled up formats, certificates, etc. [in accordance with **ITB**], in the aforesaid portal, in support of their **Pr- qualification Criteria and Techno-commercial Bid.**
- 5.17.3** Before scanning the aforesaid documents, all pages are to be signed by a person duly authorised to sign on behalf of the bidder, pursuant to **ITB**, and are to be embossed with their official seal, owing responsibility for their correctness / authenticity. All pages of the aforesaid documents should be serially marked.
- 5.17.4** Any inter-lineation, erasures, or overwriting, in the aforesaid scanned & uploaded documents, shall be valid only if they are signed by the aforesaid authorized person.
- 5.17.5** The Bidder will have to produce the original documents or any additional

documents, if asked for, to satisfy **Haldia Dock Complex, SMP Kolkata (Formerly Kolkata Port Trust)**.

5.17.6 The **Price Bid** comprised the prices only and the same are to be submitted electronically, through the website of <https://kopt.enivida.in> only. *No hardcopy of priced “Price Schedule” is required to be uploaded.*

5.18 Techno-commercial offer

5.18.1 No techno-commercial deviation and variation will be considered by SMP Kolkata, except where the Techno-commercial terms and conditions, will be found as impossible and irrelevant to the bidder.

5.18.2 If the Bidder deliberately gives wrong information or conceals any information / fact in their bid, which shall be favourable for acceptance of their bid, fraudulently, then the right to reject such bid at any stage of execution, without any financial liability, is reserved by **SMP Kolkata**.

5.19 Priced offer

The Bidder should quote the offered rate appropriately in the PRICE BID (Part-II), electronically, through the website of **E-NIVIDA** only. *Price indicated anywhere else, in any other form or manner, would not be considered for evaluation of **Price Bid**.*

5.20 Deadline for submission of bids

5.20.1 Bids must be submitted within the closing date & time as **indicated in the Schedule of Tender (SOT)**.

5.20.2 **SMP Kolkata** may, at its discretion, *extend the deadline for the submission of bids, prior to the closing date & time of e-Tendering*, by amending the Bidding Documents, in accordance with **ITB**, in which case all rights and obligations of **SMP Kolkata** and bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

5.21 Late Bids

This e-Procurement System would not allow any late submission of bid, after the closing date & time, as per the **Schedule Of Tender (SOT)** or extension, if any.

5.22 Withdrawal of bids

5.22.1 A Bidder may withdraw, substitute, or modify their bid on the e-Procurement System, before the closing date and time specified, but not beyond.

5.22.2 No bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the bidder on the “**FORM OF TENDER [for Techno- commercial (un-priced) Bid]**.” Or any extension thereof. Modification / Withdrawal of the bid sent through any other means shall not be considered by **SMP Kolkata**.

5.22.3 *Withdrawal of bid during the interval between such closing time on due date and expiring of the bid validity period, may result in forfeiture of EMD in accordance with **ITB**.*

5.23 Bid opening [except Price Bid]

5.23.1 The bids [except **Price Bid**], will be opened at the date & time, indicated in the **Schedule Of Tender (SOT)**.

5.23.2 The on-line bid-opening event may be viewed by the bidders at their remote end, by logging on to the e-Procurement System. A copy of the bid opening record

shall be made available on the e-Procurement System.

B.

EVALUATION OF BIDS

5.24 Confidentiality

- 5.24.1** Information relating to the evaluation of bids and recommendation of contract award shall not be disclosed to bidders or any other persons not officially concerned with such process until publication of the contract award.
- 5.24.2** Any attempt by a Bidder to influence SMP Kolkata in the examination, evaluation and comparison of the bids, or contract award decisions may result in the rejection of their bid and forfeiture of **EMD**.
- 5.24.3** Notwithstanding **ITB Clause No. 5.24.2**, from the time of bid opening to the time of contract award, if any Bidder wishes to contact SMP Kolkata on any matter related to the bidding process, they should do so in writing.

5.25 Clarification of bids

To assist in examination, evaluation & comparison of the bids and qualification of the bidders, the Employer (SMP Kolkata) may, at their discretion, ask any bidder for a clarification of their bid. The Employer (SMP Kolkata) may also ask any bidder to withdraw any terms/conditions mentioned by them in their offer, which are not in conformity with the terms & conditions specified in the bidding documents. In case any bidder fails to submit required clarification within the time stipulated by the Employer (SMP Kolkata), in this regard, the tender would be processed in absence of the clarifications, which may result in disqualification of the corresponding bidder for the instant tender. Any clarification submitted by a bidder, which is not in response to a request by the Employer (SMP Kolkata), shall not be considered. The Employer's (SMP Kolkata's) request for clarification and the response shall be in writing.

No change in the prices or substance of the bid shall be sought, offered or permitted, nor will the bidder be permitted to withdraw their bid before expiry of the validity period of the bid.

5.26 Deviations, reservations and omissions

During the evaluation of bids, the following definitions apply:

- (a) "Deviation" is a departure from the requirements specified in the bidding documents;
- (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the bidding documents ;and
- (c) "Omission" is the failure to submit part or all of the information or documentation required in the bidding documents.

5.27 Responsiveness of bids

- 5.27.1** Responsiveness of a bid would be determined on the basis of the contents of the bid itself, and clarification(s) in accordance with **ITB**.
- 5.27.2** A substantially responsive bid is one that meets the requirements of the Bidding Documents without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,
- (a) if accepted, would
 - i) affect in any substantial way the scope, quality, or performance of the work specified in the Contract; or
 - ii) limit in any substantial way, inconsistent with the Bidding Documents, SMP Kolkata's rights or the bidder's obligations under the proposed

contract; or

- (b) if rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.

5.27.3 Bidders shall not contain the following information / conditions to consider them responsive:

- (a) Either direct or indirect reference leading to reveal the prices of the bids in the Techno-commercial offers;
- (b) Adjustable prices, other than the provisions stated in **ITB**.

5.27.4 If a bid is not substantially responsive to the requirements of the bidding documents, it shall be rejected by SMP Kolkata and may not subsequently be made responsive by the bidder, by correction of the material deviation, reservation, or omission.

5.28 Nonconformities, errors and omissions

5.28.1 During examination, evaluation & comparison of the bids and qualification of the bidders, the Employer (SMP Kolkata) may, at their discretion, ask any bidder for submitting any document(s) [in case of shortfall in required documents (relating to capacity or otherwise)]. In case any bidder fails to submit required documents within the time stipulated by the Employer (SMP Kolkata), in this regard, the tender would be processed in absence of the documents, which may result in disqualification of the corresponding bidder for the instant tender.

Any document submitted by a bidder, which is not in response to a request by the Employer (SMP Kolkata), shall not be considered. The Employer's (SMP Kolkata's) request for submission of further document(s) shall be in writing.

5.28.2 **SMP Kolkata** shall examine the bids [including the further documents / clarifications received in accordance with **ITB**] to confirm that all documents requested in **ITB** have been provided and to determine the completeness of each document submitted.

5.28.3 Provided that a bid is substantially responsive, **SMP Kolkata** may waive any nonconformities or omissions in the bid that do not constitute a material deviation.

5.29 Examination of Pre-qualification Criteria

5.29.1 At first, the contents of the documents, submitted in support of the Pre-qualification Criteria [including the further documents / clarifications received in accordance with **ITB**] will be scrutinized and evaluated.

5.29.2 SMP Kolkata may, at their discretion, seek any other detail(s)/document(s), in subsequent course, to ascertain and get confirmed about the competence of the bidder. In case any bidder fails to submit required detail(s)/document(s) within the time stipulated by the Employer (SMP Kolkata), in this regard, the tender would be processed in absence of the documents, which may result in disqualification of the corresponding bidder for the instant tender. While evaluating Pre-qualification Criteria, regard would be paid to National Defence and Security considerations of the Indian Government.

5.29.3 In case it is found that the Pre-qualification Criteria has not been fulfilled by the bidder or otherwise their participation has not been found acceptable to **SMP Kolkata**, the respective bid will be treated as non-responsive and "Price Bid" of the respective Bidder will not be considered further.

5.30 Examination of Techno-commercial offer

- 5.30.1 After scrutiny of the **Pre-qualification Criteria**, **Techno-commercial Bids** of the Pre-qualified bidders [as indicated above] will be scrutinized & evaluated.
- 5.30.2 **SMP Kolkata** shall examine the bid to confirm that all terms and conditions specified in the **Scope of Work**, **GCC** and **SCC** have been accepted by the bidder without any material deviation or reservation or omission.
- 5.30.3 If on examination of the “**Techno-commercial Bid**” of pre-qualified bidders, it is found that they have not accepted all Techno-commercial terms & conditions of the Bidding Documents [considering all addenda / corrigenda, issued], “**Price Bid**” part of such bidder(s) will not be considered for further evaluation. Decision of **SMP Kolkata** on this matter shall be final.
- 5.30.4 During Techno-Commercial evaluation, i.e. evaluation of Part - I of tender, an offer shall be considered **non-responsive** in case:-
- a) Requisite “Bid Security Declaration”, duly filled in, signed & stamped, is not submitted.
 - b) Requisite Bid Document Fee is not paid.
 - c) Valid Certificate from MSME / Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC) under single point registration / Aadhar Udyog or any empowered Central / State Govt. authority to get benefit in this regard is not submitted.
 - d) Certificate is not submitted, in case of exemption from depositing Bid Document Fee.
 - e) Any indication of quoted price anywhere in the document(s) uploaded by the bidder.
 - f) Earnest Money Deposit is not paid by bidder(s) as per SOT.

5.31 Opening of Price Bid

PRICE BIDS of the bidders, who qualify in the “Pre-qualification & Techno-commercial Bid”, will be opened on a later date upon due intimation to the concerned bidders at their address furnished in their bid.

The on-line price-bid opening event may be viewed by the bidders at their remote end, by logging on to the e-Procurement System. A copy of the price-bid opening record shall be made available on the e-Procurement System.

5.32 Evaluation criteria and selection of Successful Bidder

- 5.32.1 While evaluating the Price Bids, the Price quoted by the Bidders against items of the Price Schedule shall be taken into account and the **TOTAL PRICE**, which would be arrived at, by adding quoted prices of all items of the Price Schedule, will be considered for evaluation. Selection of the successful bidder will be made on the basis of the “**lowest TOTAL PRICE**” thus arrived, subject to acceptance of all terms & conditions of the instant Bidding Documents. Evaluation will be done based on the quoted total price only and no GST will be added, during evaluation. No additional amount [except applicable GST] would be paid by SMPK to the Contractor.
- 5.32.2 In case it is found that the quoted “**TOTAL PRICE**” is same for two or more bidders and their bids become the lowest, the respective bidders will be given chance to submit their fresh Price Bid, subject to the condition that the fresh rate so quoted must be less than the rate quoted by the respective bidders.

earlier. Selection of the successful bidder will be made on the basis of the revised “**lowest TOTAL PRICE**” thus obtained.

- 5.32.3 The MSE’s registered with NSIC / DIC shall not be eligible to get any benefit other than exemption from payment of EMD & Cost of Bidding Document as per New Public Procurement Policy as notified by the Govt. of India, Ministry of Micro Small & Medium Enterprises (MSME) in the Gazette of India vide no. 503, dated 26.03.2012, as splitting of the work cannot be done, it being a composite work.
- 5.32.4 It is not obligatory on the part of SMP, Kolkata to accept the lowest bid. They reserve the right to accept a tender in full or in part and / or reject a tender without assigning any reason thereof.
- 5.32.5 In the event of acceptance of tender in part, the rate(s) against each of the item(s) constituting the order shall be identical to the rate(s) for the corresponding item(s), based on the price quoted in the Price Bid and tender terms & conditions shall also remain unaltered. Irrespective of whether order is placed on part or, on the whole, no plea for subsequent withdrawal or the amendment will be entertained.

C. **AWARD OF CONTRACT**

- 5.33 Subject to ITB Clause No. 5.33, **SMP Kolkata** shall award the contract to the Bidder whose offer has been determined to be the lowest evaluated bid [as per **ITB Clause No. 5.32**] and is substantially responsive to the Bidding Documents.

5.34 **Notification of award**

Prior to the expiration of the period of bid validity or extended validity in accordance with **ITB**, **SMP Kolkata** shall notify the **Successful Bidder**, in writing, that their bid has been accepted. The notification letter (hereinafter called the “**Letter of Acceptance**”) will be treated as “**Order Letter**” and will constitute the formation of the contract. Such order letter shall specify the “**Contract Price**” in line with **SCC**.

5.35 **Signing of contract agreement**

- 5.36.1 After placement of order, **contract agreement** [as per the form furnished in **Section- XI**] should be executed between **Syama Prasad Mookerjee Port, Kolkata** (formerly **Kolkata Port Trust**) and the **Contractor (Successful Bidder)**. In this respect, within a week of receipt of intimation regarding acceptance of their bid, the successful bidder shall have to submit, at their cost, required **Stamp Paper** [Non-judicial Stamp Paper of worth not less than **Rs 50.00**] & **dummy papers** (for three sets) along with relevant documents.

Immediately after receipt of the above papers & documents, **SMP Kolkata** will send three sets of **contract agreement form** [one set printed on Stamp Paper & dummy papers and single sets printed on dummy papers], photocopy of **one set of documentary transactions between them and SMP Kolkata** (till finalisation & award of the Contract) and **Contract Documents** [incorporating all accepted changes and addenda / corrigenda issued, if any], duly signed by the representative of **SMP Kolkata** at appropriate places on each pages.

Within a week, thereafter, the Contractor (Successful Bidder) shall have to return **Contract Agreement forms** (three sets) [after affixing their common seal], the set of **documentary transactions** and **Contract Documents**, duly signed by them at appropriate places on each page.

- 5.36.2 The **contract agreement form & Contract Documents** should be signed by the authorized persons of the Contractor, authorized in this respect.

5.36.3 After receipt of the **contract agreement forms** (three sets), duly signed by authorised person of **SMP Kolkata** & authorized person of the Contractor (Successful Bidder), the same shall be kept under **SMP Kolkata**'s custody, after affixing the Common Seal of **SMP Kolkata**.

One copy of such **executed contract agreement** (on dummy paper), along with one photocopy of signed **documentary transactions** and **Contract Documents** will be handed over to the Contractor for their record & future reference.

5.36.4 Until such contract agreement is executed, the other documents referred to the definition of the term "Contract" [**GCC Clause**], shall collectively be the contract.

5.36 Performance Guarantee / Security Deposit

5.37.1 Within **twenty-eight (28) days** of issuance of "**Letter of Acceptance**" by SMP Kolkata, the Successful Bidder shall provide the Performance Bank Guarantee in accordance with the Special Conditions of Contract, using the form furnished in **Section XI**.

5.37.2 Failure of the successful bidder to submit the above-mentioned Bank Guarantee for **Performance Guarantee / Security Deposit or sign the contract agreement** shall constitute sufficient grounds for the annulment of the award and other actions as stipulated in the tender.

5.37.3 All costs, charges & expenses, including Stamp Duty, shall be borne by the Successful Bidder.

5.37.4 **No interest / charge**, of whatsoever nature, shall be paid by SMP Kolkata on the amount of Performance Guarantee / Security Deposit, held by them (as per SCC) at any stage.

SECTION – VI

TECHNICAL SPECIFICATION & SCOPE OF WORK

Part-I Electrical Works

6.1 GENERAL

1. The works will be executed to comply with the General Specifications for Electrical works and conforming to the Indian Electricity Act & rules, BIS & direction of Engineer.
2. The items of work shall be executed as per detailed technical specifications and scheme. In case of contradiction between schedule of work with its Additional Specification and the General Specification, the former shall prevail.
3. The work will be executed as per general arrangement drawing and detailed fabrication drawings duly approved by the Engineer. The various items of equipment will be ordered only after the drawings are approved and quantities in detail of various items are ascertained as per actual requirements. Therefore the actual quantities / measurement may vary from the stipulated quantities, which are only estimate.
4. The contractor/agency will engage suitable qualified/experienced/ licensed engineering supervisor for the work and suitable skilled personnel with required license for doing the erection work. Required special tools to be operated in the execution of the job.
5. The work will be performed as per the day to day instruction and approval of the engineer. All materials/ equipment will be used after taking approval of the Engineer.
6. Equipment will be duly inspected in the manufacturer's works / premises by Engineer/TPI Agency before despatch to the site.
7. The work will be executed as per the programme of completion of the project. The delivery & erection schedule of various materials/ equipment will be as per approval of Engineer.
8. The contractor holds responsibility for the entire job as per relevant specifications. If any item is left out within the schedule of work but if it is considered essential for the completion of the job, the contractor has to carry out the items as extra substituted item.
9. The contractor shall have to make arrangements, at his own risk and cost, for transportation of materials from the point of issue of stores to site of work, if any.
10. The contractor shall ensure that the staff employed by him for execution of the electrical work, possess the valid electrical license issued by competent authority. Consequences arising due to the default of the contractor in not complying with the above condition shall be the entire responsibility of the contractor.
11. All concealed work and earthing shall be done in the presence of the Engineer or his authorized representative.

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12. The schematic diagram/dimensional drawings of the various electrical cubical panels shall be got approved from the Engineer before fabrication and shall comply with specifications and Indian Electricity Rules. The panels shall conform to IS: 8623/1993.
13. All panels/DB shall be suitable for 45°C ambient temperature.
14. The MCB shall be of the same make as that of MCB DB's. Contractor shall obtain approval of the Engineer before procurement of MCB DB's. All DB's shall be double door type confirming to minimum IP-54 degree of protection.
15. Miniature Circuit Breaker shall comply with IS –8828-1996 / IEC 898. Miniature Circuit Breakers shall be quick make and break type for 230 / 415 V A.C., 50Hz application with magnetic thermal release for over current and short circuit protection. The breaking capacity shall not be less than 10KA at 415V A.C. The MCB shall be DIN mounted. The MCB shall be current limiting type (Class – 3).
16. MCB shall be as per their tripping characteristics curves defined by the manufacturer. The MCB shall have the minimum power loss (watts) per pole defined as per the IS / IEC and the manufacturer shall publish the values.
17. The MCB housing shall be heat resistant and having high impact strength. The terminal shall be protected against finger contact to IP20 degree of protection.
18. All model of modular accessories required for the work shall be got approved from the Engineer among the approved makes. The base plate shall be preferably in sheet steel or otherwise in unbreakable polycarbonate. The cover plates shall be screw less type in shade approved by the Engineer. The GI box shall be of the same make as the modular accessories.
19. Contractor shall have to check the site order Book for any instructions of Engineer or his authorized representative and sign the site order book. He shall be bound to ensure compliance with the instructions recorded therein.
20. All the MCCB's shall have microprocessor based trip unit for reliable protection and accurate measurement. The rated Service breaking capacity (kAmps) shall be 100% of Ultimate breaking capacity (kAmps). All MCCB's shall be current limiting type with features as per relevant IS codes and specification. There has to be total discrimination between the incoming and outgoing MCCB's and MCB's, as required, at the MDB's and DB's level.
21. MCCB's shall be used with rotary handle and terminal spreaders and all terminals shall be shrouded to avoid direct contact.
22. All measuring CT's, unless otherwise specified shall be cast resin CT's with class 0.5 accuracy. All digital measuring meter shall be with class 0.5 accuracy unless specified otherwise.
23. Mechanical Castle key interlock shall be provided among the incomer MCCB's, wherever, as applicable, two different incomer sources are provided in the panel as per the directions of the Engineer. The same is deemed included in the scope of work.
24. All measuring and indicating instruments shall be protected through MCB's of 0.5 Amps rating.
25. General arrangement drawing of the switchboard, LT/HT switchgear shall be got approved by the Engineer before commencement of manufacturing.

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26. Conduit layout as per switching arrangement shall be prepared by contractor and got approved from the Engineer before slab casting. At all expansion joints in the building suitable arrangement shall be ensured during conduiting.
27. Ratings, sizes and quantities shall be checked and considered for satisfactory operation of electrical system complete in all respect.
28. Conduits, Switchboards, Sockets to be provided on walls shall be open type unless specifically approved by Engineer.
29. Conduits on ceiling in existing system may be provided on surface and in new construction shall be open type.
30. All measuring and indicating instruments shall be protected through MCB's and isolating switches.
31. Breaker shall have LCD display to show the metering and protection parameters.
32. Equipment are to be inspected in the respective manufacturer works before dispatch and test reports as applicable as per BIS standards shall be provided for each equipment to Third Party Inspection (TPI) Agency. The TPI Agency is appointed by the port and cost of TPI Agency is borne by the Port.
33. The firm shall deploy only licensed personnel as required under IE Rules, for execution of the electrical works. The firm shall be liable to submit the list of such personnel along with the attested copy of the licenses at the time of execution.
34. It is important that every equipment is tested fully before dispatch.
35. All materials for the work shall be supplied from approved list of manufacturer and any item, not covered in approved list, shall be supplied after getting approval from Engineer or his authorized representative.
36. Any materials brought for work which is not matching with specification will be rejected and the rejected materials shall be removed from site on the same day.
37. All fees payable to concerned authorities and other local bodies if any shall be paid by the contractors.
38. Any part or whole of the system which requires approval of the Central Electricity Authority, or any other statutory body, should be arranged by the Contractor at his cost. It is the responsibility of the Contractor to submit the system drawings with all details to the Electrical Inspectorate and obtain their approval.
39. Contractor shall obtain permit/approval from concerned authorities before commencement of work. All documents/drawings required for such permit/ approval shall be prepared by the contractor.
40. Contractor shall have a valid electrical contract licence with HT installation issued by appropriate authorities.
41. Test certificates both type test and routine tests wherever required shall be furnished along with supply for all Electrical/Mechanical items.

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42. Inspection / acceptance, in no way shall absolve the contractor from supplying material as per standards / codes and warranty or other obligations under the contract.
43. The contractor shall arrange the testing/measuring equipment by own cost to carry out pre-commissioning test of all equipment at site as per IER.
44. All electrical works shall be tested by the contractor in the presence of Engineer/TPI Agency and to the entire satisfaction as per IE Rules.
45. Data to be furnished by the bidder after award of order
 - a) The contractor shall submit detail shop/fabrication/layout drawings for equipment.
 - b) **Five** Set of copies of installation, operation and maintenance manuals, descriptive bulletins etc, shall be furnished prior to / at the time of despatch of all materials. Manuals shall include the following aspects:
 - i) Outline dimension drawing showing relevant cross sectional views, earthing details and constructional features including foundation drawing.
 - ii) Rated voltage, current, duty cycle and all other technical information which may be necessary for correct operation of the switchgear.
 - iii) Storage details for prolonged duration.
 - iv) Unpacking.
 - v) Handling at site.
 - vi) Erection
 - vii) Pre-commissioning test.
 - viii) Operating procedure.
 - ix) Maintenance procedures.
 - x) Precaution to be taken during operation and maintenance work.
 - c) **Test Certificates**
The contractor shall supply equipment from the Manufacturers, who are having type test certificate issued by CPRI / ERDA. Also, the contractor shall furnish the type test certificate issued by CPRI / ERDA to the manufacturers of similar rating during approval of above equipment.
 - d) On completion of work the contractor shall submit all drawings, manuals and test certificates, etc. for all equipment / materials ordered and as specified by the Engineer.

6.2 **SCOPE OF WORK**

Equipment, as mentioned hereunder, shall be erected / installed inside existing Sub-station building as per approved layout plan.

(a) Electrical Works (Supply, Installation Testing & Commissioning) at Sub-station

- 1) 33/3.3 kV, 6000kVA Oil type Transformer - 02Nos.
- 2) 33 kV, 1250A, VCB Panels of 31.5KA for 3sec. as per Table-I
- 3) 33 kV (UE) XLPE, 3C X 120Sq.mm. Screened, Aluminium, armoured cables along with heat shrinkable cable end terminations.

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- 4) 3.3kV (UE) XLPE, 3C X 400Sq.mm. Screened, Aluminium, armoured cables along with heat shrinkable cable end terminations.
- 5) Dismantling of existing HT and LT Switchgear/Panels, HT/LT Cables etc.
- 6) St. through jointing & end terminations of HT cables as mentioned above.
- 7) 110V Battery Bank, battery chargers and DCDB for Control supply of HT Panel.
- 8) Plate Earthing of above Equipment.
- 9) Fixing of GI cable trays of suitable size.
- 10) 3 C Copper Power cable and 12C Copper control cable.

(b) Civil Works

Following civil works are in the scope of the contractor.

1. Providing RCC civil foundation for 33/3.3kV, 6MVA Transformers.
2. Providing RCC foundation and GI structure for 3.3 kV and 33KV Indoor and Outdoor cable termination at Master Control sub-station.
3. Necessary modification in Sub-station floor and wall for dismantling of old MOCB panels and installation of new VCB Panels.

(c) Salient Points.

- a) Equipment installation layout shall be submitted by the contractor before erection of equipment at site after approval by HDC, SMP, Kolkata. Contractor shall arrange for all necessary means for erection / installation equipments as per manufacturer's guidelines.
- b) During execution of the work, if any damage takes place in the existing utility, the same will have to be mended good by the contractor, at their risk, cost and arrangement. Otherwise, the same will be repaired/ replaced by HDC, either departmentally or through outside agency and the cost of repairing/ replacement will be recovered from the contractor, with departmental charges.
- c) For the purpose of application (by HDC, SMP, Kolkata) for obtaining necessary approval/ clearance from the Regional Inspectorial Organization, Central Electricity Authority / Statutory Authority, the contractor would have to submit/ deposit required documents, drawings, test certificates/ reports etc. to HDC, SMP, Kolkata. The contractor along with the required documents, drawings, test certificates/ reports etc. would also have to be present during inspection by the Regional Inspectorial Organization, Central Electricity Authority / Statutory Authority.
- d) The contractor should clearly understand that though the application would be made by HDC, SMP, Kolkata to the Regional Inspectorial Organization, Central Electricity Authority / Statutory Authority, for obtaining necessary approval/ clearance from them, it is the responsibility of the contractor concerned to obtain the approval/ clearance from the Regional Inspectorial Organization, Central Electricity Authority / Statutory Authority against the work executed by the contractor.

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HT & LT CABLE.

Scope

Supply, laying, inspection, testing, commissioning and making terminations of 3.3 KV (UE), 33 kV (UE) grade XLPE insulated power cables.

Codes & Standards

The design, construction, manufacture and performance of cables shall comply with all currently applicable statutes, regulations and safety codes of the locality where cables shall be installed. Nothing in this specification shall be construed to relieve the successful BIDDER of his responsibility.

All the cables shall conform to the latest applicable IS/IEC standards.

Power Cable

Power cables should be multicore 3.3 KV (UE), 33 kV (UE) grade aluminium stranded conductor colour coded, extruded XLPE insulated, extruded semi-conducting screened over each core and insulation, extruded inner sheathed, common extruded inner sheathed for multi core cable, galvanised steel strip armoured and overall extruded sheath conforming to IS-7098 Part II. Armouring of multicore cable shall be of single layer, galvanised steel round wire or flat strip. HT/LT Cable outer sheathed colour:-BLUE.

The Cables shall be suitably designed for variation in power supply as follows:

The voltage variation $\pm 10\%$

Freq. variation $\pm 5\%$

Following cable size shall be supplied by the bidder:

- i. 3Core, 120 Sqmm., HT Cable, 33 kV (UE) grade, XLPE, U.G. Alu. conductor Screened Cable, Strip armoured, PVC ST2 type inner sheathed and PVC ST2 type outer sheathed, FR cable.
- ii. 3Core, 400 Sqmm HT Cable, 3.3 KV(UE) grade, XLPE U.G. Alu. conductor Screened Cable, PVC ST2 type inner sheathed and PVC ST2 type outer sheathed, armoured, FR cables.
- iii. 12C x 2.5Sqmm. PVC insulated ST2 type sheathed, armoured, FR cables Copper conductor control cable.
- iv. 3C x 2.5Sqmm. PVC insulated ST2 type sheathed, armoured, FR cables Copper conductor Power cable.

6.2.1 Laying of Cables.

For laying cables along building steel structures and technological structures the cable shall be taken by clamping with **Aluminium** saddles screwed to the GI flats welded to the structure. **The** flats are of **hot** dip galvanised after fabrication.

For laying cables along concrete walls, ceilings etc. the cables shall be taken by clamping with **Aluminium** saddles screwed to the **hot dip GI** flat welded on to the inserts. Where inserts are not available the saddles shall be directly fixed in the walls using metallic anchor fasteners and **GI** flat spacers of minimum 6 mm thick.

The **Aluminium** saddles shall be placed at an interval of not less than 500 mm both for horizontal and vertical runs. However, at the bends it shall be placed within 300 mm and where terminating to the equipment/junction box the cable shall be clamped immediately before such termination.

Cable Net Work shall include Power Cables, which shall be laid in buried trenches/ cable trays / through GI Pipes & Hume Pipes, rising main etc. whichever is applicable.

Cable routing shall be checked in the field to avoid interference with structures, heat sources, drains,

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pipings etc. as far as possible and minor adjustments shall be done to suit the field conditions, wherever deemed necessary without any extra cost.

The HT cables while laying will have to be separated from existing HT, LT, Telecommunication, OFC Cables by adequate spacing or running through independent pipes, trenches or cable trays, as applicable.

All cable routes shall be carefully measured and cables cut to the required lengths leaving sufficient lengths for the final connections of the cables to the terminal of the equipment.

The various cable lengths cut-off from the cable reels shall be carefully selected to prevent undue wastage of cables. The quantity indicated in the Bill of Quantity is only approximate. The Contractor shall ascertain the exact requirement of cable for a particular feeder by measuring at site and avoiding interference with structure, foundation, pipelines or any other works as far as possible. Before starting Cable Laying, Cable Drum Schedule shall be prepared by contractor and get that approved by competent authority.

Cable as far as possible shall be laid in complete, uncut lengths from one termination to other. Cable shall be neatly arranged in the trenches/ trays/ pipes in such a manner so that crisscrossing is avoided and final take-off to the equipment/switch gears is facilitated.

Arrangement of cables within the trenches/ trays/ pipes shall be the responsibility of the contractor.

Removal of concrete covers for purposes of cable laying and reinstalling them in their proper positions after the cables are laid shall be done by the contractor at no extra cost. Cable shall be handled carefully during installation to prevent mechanical injury to the cables. During laying of cables, Cable Drum Lifting Jacks, sufficient numbers of Cable Rollers and other materials etc. as necessary must be used to avoid any mechanical injury to the cables. Directly buried cable shall be laid underground in Cable Trenches duly excavated by the contractor as shown in the enclosed Drawing No. SK- 334.

The width of the trench shall vary depending upon the number of cables and diameter of each cable. Width of the Cable Trench should be such that all cables should be correctly spaced and arranged. The cables shall be laid in trenches as shown in the enclosed sketch. Before cables are placed, the bottom of the trench shall be leveled and filled with a layer of silver sand as shown in the Drawing No. SK- 334. This sand shall be leveled and the cables shall be laid over it. Bricks are to be placed at both sides of the cable. Then the cable inside the brick walls to be covered with sand up to the height of walls and sand shall be pressed lightly. A protective covering of Bricks shall be placed on top of protective Bricks placed at both sides of Cable. The remainder of the trench shall then be back filled with soil rammed and leveled. After laying of the cables in the trench and before placement of protective covering by brick, every cable shall be given an insulation test in presence of site engineer/ authorized representative. Also after back filling the trench with soil, rammed and leveled, insulation test of the cable shall be carried out in presence of Site Engineer/Authorized representative.

All wall openings/Pipe Sleeves shall be effectively sealed after installation of cables to avoid seepage of water inside buildings/lined trench. At road/drain/pavements crossing, suitable sizes of GI Pipes are to be used. After the cables are installed and all testing is complete, the conduit/pipe sleeve ends shall be plugged with a suitable weatherproof plastic compound/ PUTTI, for sealing purpose. The cost of the same shall be deemed to have been included in the installation of cable laying through pipe sleeves/conduits and no separate payment shall be made. When cables pass through foundation walls, or other underground structures, if necessary, ducts or opening shall have to be provided by the contractor.

However, shall it become necessary to cut holes in the existing foundations or structures, the contractor shall determine their locations and obtain approval from competent authority before cutting is done. Cutting, if necessary and mending good of any cut portion should be done by contractor without any extra cost. At Road Crossing and other places where cables enter pipe sleeves, adequate bed of sand shall be given so that the cables do not stack and get damaged by pipe ends. Drum number of each cable from which it is taken shall be recorded against the cable number in the cable schedule. All GI Pipes shall be laid as per site requirements. The open ends of the pipes shall be suitably plugged after they are laid in final position. Laying of the cable will be as per the enclosed Drawing No. SK- 334. The contractor will have to submit the detailed cable route diagram, with detailing of the Hume Pipes & GI Pipes used, position of the straight through cable joints etc. for checking at our end and subsequent approval of the same. As built drawing (in triplicate) of the above cable route will have to be submitted after completion of the above work.

MEASUREMENT:

Cable length should be measured jointly prior to giving clearance for earth back filling etc. Distance between Socket of one end and Socket of other end of the laid cable to be considered for payment against both supply & laying of cable.

6.2.2 Laying of Cables in Exposed/Embedded GI Pipes/Hume pipe Road Crossing, Railway Crossing, Drains, Culverts or any similar concrete structure etc.

GI Pipes /Hume pipe for drawing cables in plant buildings shall be of **Heavy Duty**, galvanised, electric resistance welded, screwed type conforming to IS: 1239 (Part-I). GI Pipe/Hume pipe of the following sizes shall be used:

- a) 150 mm nominal bore GI pipe
- b) 150 mm dia. Heavy duty NP-4 Hume pipe.

For installation of cables in GI Pipe /Hume pipe. Complete system shall be installed first without cables but having suitable pull wires laid in the pipes to facilitate cable pulling.

Ends of GI pipe shall be cut square and the threads out in the field shall have the same effective length and the same dimensions and taper as specified for factory out threads. Ends of pipe shall be reamed to remove burrs and sharp edge after threads are cut.

Exposed GI pipes shall run parallel or perpendicular to column lines or building lines so as to match with the architectural arrangement of the building. Concealed GI pipes shall run in direct lines with minimum bends.

Laying of Reinforced Concrete Pipe and Galvanized Mild Steel Tubes should be done wherever necessary, such as at Road Crossing, Railway Crossing, Drains, Culverts or any similar concrete structure etc. The scope includes cutting of road, Railway Crossing, Excavating of Trenches, etc. including mending good work. The depth of laying of the pipes should have to be matched with the underground cable trench, as far as possible and practicable. Making jointing between collars and pipes, with cement mortar (1 cement: 2 medium sand) and cutting the Reinforced Concrete Pipe to the required length, if necessary, to be done by the contractor at their own cost and arrangement. Cutting of Galvanized Pipe to required length and threading, bending, jointing by Socket as required, supply and fixing of support clamps/ brackets should be under the scope of contractor. Re-filling of the trench after laying the reinforced concrete pipes and galvanized mild steel tubes are also to be done by the contractor.

Rates are to be quoted accordingly.

6.2.3 Depth of laying

Sl.No.	Cable	Laying Type	Depth of laying (Average)
1	HT Cable	Open cut excavation with brick protection	1500 mm
		Boring through GI pipe	2000 mm
		Open cut excavation through Hume / GI pipe	1500 mm
		Through existing RCC trench / Hume pipe / GI Pipe.	As per available depth.
2	LT Cable	Open cut excavation with brick protection	850 mm
		Boring through GI pipe	2000 mm
		Open cut excavation through Hume / GI pipe	1500 mm
		Through existing RCC trench / Hume pipe / GI Pipe.	As per available depth.

Note: Road level to be considered as reference level.

6.2.4 Bricks

Crushing strength, efflorescence shall conform to class designation 10 (as per IS 1077, 1986) and as per the specification, given below:

- The brick shall have clear ringing sound.
- The average size of the bricks shall be in the range of 250 mm (± 4 mm) x 125 mm (± 2 mm) x 75 mm (± 2 mm).

6.2.5 Cable Termination (Heat Shrinkable type)

Termination of aluminium conductor power cables shall be by means of compression method using compression type lugs.

The **End** termination for use on the cables shall be suitable for the type of cables offered.

The accessories shall be supplied in kit form and each component of the kit shall carry manufacturer's mark of origin.

The kit shall include all stress grading, insulating and sealing materials apart from conductor fittings and consumable items. The instruction pamphlet shall also be included in each kit.

The contents of the kits shall be suitable for storage without deterioration under the climatic conditions given in the specification with shelf life exceeding 5 yrs.

6.2.6 Cable Straight through Jointing. (Heat Shrinkable type)

The contractor shall submit cable route plan and tentative location of straight through joints for approval to Competent Authority. No straight through joints are allowed in RCC Cable trench.

Additional length (Loop) of 5 mtrs. (approx.) cable should be kept at each end of the cables near the straight through cable joints. It is required to measure the insulation resistances of the cables before and after straight through cable jointing. This scope includes supply of all required materials including complete straight through cable jointing kits, with ferrules and all other accessories.

The accessories shall be supplied in kit form and each component of the kit shall carry manufacturer's mark of origin.

The kit shall include all stress grading, insulating and sealing materials apart from conductor fittings and consumable items. The instruction pamphlet shall also be included in each kit.

The contents of the kits shall be suitable for storage without deterioration under the climatic conditions given in the specification with shelf life exceeding 5 yrs.

6.2.7 Cable Tags

All cables will be identified close to their termination points by cable nos. Cable numbers will be punched on Aluminium strip/ PVC Strip {2mm. thick (approx.)} securely fastened to the cable and wrapped around it. Alternatively, Cable Tags shall be circular in construction to which cable number can be conveniently punched.

Cable designations are to be punched with letter/number punches and the tags are to be tied to cables with piano wires of approved quality and size. Tags shall be tied inside the panels beyond the glanding as well as below the glands at cable entries. Along trays tags are to be tied at all bends.

Each underground cable shall be provided with Identification Tags (made of PVC) securely fastened at every 30 Mtrs. distance if the continuous length is more than 50 Mtrs. of its underground length. At least one tag at each end before the cable enters the ground will have to be provided. In unpaved areas, Cable Trenches shall be identified (by means of cable markers). These shall be placed at location of changes in the direction of cables and at intervals of not more than 30 Mtrs. and at Cable Joint Locations.

6.2.8 Packing and Markings

The cable shall be wound on a steel drum conforming to relevant BIS standard and packed. The ends of the cable shall be sealed by means of non-hygroscopic sealing material.

The cable drum shall carry the following information stencilled on the drum:

- i) Manufacturer's Name and Trademark
- ii) Type of cable and voltage grade.
- iii) No. of cores
- iv) Nominal cross-sectional areas of conductor
- v) Cable code
- vi) Length of cable on drum
- vii) No. of lengths on the drum if more than one
- viii) Direction of rotation of Drum
- ix) Gross weight
- x) Weight of Drum with Ballens (if any)
- xi) Weight of cable
- xii) Reference of any Indian standard
- xiii). ISI Marking on the drum
- xiv) Year of Manufacturing

6.2.9 Tests & Test Reports

Type test certificate for similar type & Rating of Cables be submitted by successful bidder.

The Routine and acceptance tests specified in the applicable standards shall be arranged by the Contractor and carried out on **Cables** as per latest relevant IS Standards in presence of **Engineer/Third Party Inspection(TPI) Agency appointed by HDC at the manufacturer's works & at site respectively. The cost of the TPI Agency is borne by Port.** The Certified copies of test certificates shall be submitted before despatch.

6.3 OIL TYPE TRANSFORMERS

A Electrical Design

- i) Generally as per IS 2026 – Part 1, 2 & 4 of 1977 and Part 3 of 1981.
- ii) 3 phase, core type, oil filled
- iii) Rated output, voltage ratio, vector group shall be provided as specified in technical particulars for design.
- iv) Rated frequency 50 Hz, + 3%, -3%.
- v) Insulation level shall be designed according to the voltages specified below.

Sl. No	Description	33kV System	3.3V System
1.	Nominal system voltage (kV)	33	3.3
2.	Max. system voltage (kV)	36	3.6
3.	One minute power frequency withstand voltage (kV)	70	10
4.	Peak impulse test withstand voltage (kV)	170	40

- vi) Transformers shall be capable of delivering rated current at an applied voltage up to 105% rated voltage without exceeding the temperature limits.
- vii) Overload capacity of the transformer shall be as per IS 6600 - 1972 unless specified otherwise.
- viii) Shall be operable at its rated capacity at any tap with voltage variation of $\pm 10\%$ of corresponding to voltage of the particular tap.
- ix) Permissible maximum temperature at rated output and principal tap at the ambient temperature of 50°C

Top oil (by thermometer)	85°C
Windings (by resistance method)	95°C
Maximum Hot Spot Temperature	105°C

- x) Transformers shall be designed to withstand the thermal and dynamic stresses due to short circuits at its terminals or symmetrical/ asymmetrical faults on any winding. Short circuits withstand capacity for the bolted fault at the terminals shall not be less than 5 second duration with respect to fault level specified. Design calculation to be submitted for concurrence.
- xi) The maximum temperature at the end of the specified duration shall not be more than 250°C with the temperature prior to short circuit corresponding to maximum permissible overload.
- xii) Transformer shall be designed for minimum no-load and load losses within the economic limit.
- xiii) Designed for suppression of harmonics especially 3rd and 5th.

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B Magnetic Circuit

- i) Low loss CRGO silicon steel shall be used.
- ii) Laminations shall be annealed in a non-oxidizing atmosphere to relieve stresses and restore the original magnetic properties of CRGO sheets after the cutting and punching operations.
- iii) CRGO sheets shall be coated with insulation varnish compatible with the sealing liquid.
- iv) Insulation to withstand annealing temperature as high as 850 Deg. C and shall reduce eddy current to minimum
- v) Ducts to be provided to ensure adequate cooling.
- vi) Core, framework and clamps arranged and tightened to securely hold laminations in order to prevent any settling or displacement in case of heavy shocks during transport, handling or short circuits.
- vii) Flux density under specified over voltage or frequency conditions shall be within the maximum permissible for the laminations. However, it shall not exceed 1.6 tesla at rated voltage & rated frequency.
- viii) Transformers shall be designed to withstand 110% over fluxing corresponding to rated voltage.
- ix) Magnetising current shall be maximum 1% of the rated current.

C Windings

- i) Material shall be electrolytic grade work hardened copper of high proof stress
with more numbers of radial support.
- ii) Shall be pre-compressed, press board, pre-stabilization of coil & shall be subjected to shrinkage treatment.
- iii) Completed core and winding to be vacuum dried in full vacuum and impregnated immediately.
- iv) Shall be braced to withstand shocks due to rough handling and forces due to short circuit, switching or other transients.
- v) Permanent current carrying joints in winding and leads shall be brazed. Connections to bushings & OLTC shall be crimped.
- vi) Coils shall be supported using dried and high-pressure compressed wedge type insulation spacers, blocks & cylinders.
- vii) Insulating materials shall be compatible with transformer liquid under all service conditions.
- viii) Leads to the terminal board and bushings shall be rigidly supported.

D Insulation

Inter turn and inter coil insulation shall be designed such that dielectric stress is uniformly distributed throughout the windings under all operating conditions.

E Tank

- i) Welded thick gauge low carbon steel grade plates stiffened and reinforced to withstand without deformation all stresses applied during transport and operation or short circuit conditions.
- ii) Oil tight welds and joints shall be provided.
- iii) Fully assembled transformer with its radiators, conservator and other fittings shall withstand for one hour a pressure corresponding to twice the normal head of liquid or to the normal pressure plus 35 kN/sq.m, whichever is lower, measured of the base of the tank.
- iv) Plates shall be protected internally against corrosion due to insulating liquid.
- v) Provided with inspection opening and cover/with handling equipment) to provide access to bushing connections.

- vi) Form of cover shall be such as to prevent any stagnant water deposit and to drain gas bubbles towards the buchholz relay
- vii) Tank (with radiators when welded to tank) shall be capable of withstanding 250 mm of mercury vacuum.
- viii) Tank shall be suitably designed to suppress harmonics available in the system as well as generated by transformer.

F Conservator and Breather

- i) Conservator mounted on frame, integral with tank in such a manner that under all conditions and the lowest oil level the bushings remain under the head of liquid.
- ii) Conservator volume shall be sufficient to maintain oil seal from ambient to oil temperature of 90°C
- iii) Oil filling hole with cap and a drain valve to drain the oil completely shall be provided. One end of the conservator shall be bolted into position so that it can be removed for cleaning purposes.
- iv) Silica gel breather with inspection window and oil seal shall be mounted at 1.4 m from ground level and connected to conservator.
- v) Prismatic type oil level gauge with maximum and minimum levels marked.
- vi) One no. 150 mm dia. dial type magnetic oil level gauge with alarm & trip contacts shall also be provided.

G Oil

- i) The oil shall be as specified in IS: 335 and shall be suitably treated, free from moisture and have uniform quality throughout.
- ii) Oil shall be supplied for the first fill of oil and 10% excess in non-returnable drums.

H Pressure release device

- i) Adequate number of Pressure release device shall be provided on tank at suitable locations. This shall operate at static pressure less than hydraulic test pressure of tank. This should have one potential free contact for alarm/trip and should be wired to Marshalling box.
- ii) Discharge of Pressure release device shall be taken through pipes away from transformer and prevented from spraying on tank.

I Buchholz Relay

- i) Double float relay as per IS 3677 - 1985.
- ii) Shut off valves on either sides of the buchholz relay
- iii) Pot cocks at the top and bottom of relay drain plug, inspection window, calibrated scale, terminal box with oil tight double compression type brass gland.
- iv) Potential free, self reset independent alarm and trip contacts, rated to make, break and carry minimum 2 amps at 48 V DC. No auxiliary relay shall be used to multiply the contacts. Contacts are to be wired to the marshalling box.

**J Cooling
General**

The cooling system provided is as follows.

ONAN - Oil Natural, Air Natural

K Radiators

Radiators shall be detachable type directly mounted or separately mounted. Flanged, gasketed and bolted connections shall be used for connecting the radiators to the tank.

The following accessories shall be provided for each radiator/radiator bank

- i) Top and bottom shut off valves and blanking plates.
- ii) Bottom drain plug and top filling plug.

- iii) Lifting lugs
- iv) Thermometer pockets with thermometers in the inlet and outlet pipes (for separately mounted radiator banks).
- v) Top and bottom filter valves (for each separately mounted radiator bank).
- vi) Air release devices.
- vii) Provision for earthing

L Valves And Connections

- i) Valves of sluice type with hand wheels
- ii) All valves excluding radiator valves shall be made of gun metal only.
- iii) Clear indication of open and closed position
- iv) Provided with blanking plates or screwed plugs
- v) Padlocking facility to lock in closed/open position.

M Terminations

It shall be possible to withdraw the transformer easily after disconnecting the connections without disturbing the cable terminations.

- i) For cable termination
 - a) Air insulated cable end box suitable for the type and number of cables specified.
 - b) Air insulated disconnection chamber with inspection opening
 - c) Compressed type brass cable glands with tinned copper lugs.
 - d) Bolted type gland plates (non-magnetic material wherever specified).
 - e) Sealing kits with associated accessories like stress relieving cones, insulating tape, trifurcating boot, HT insulating tape.
- ii) For bus duct termination
 - a) When bus duct termination is specified, flanged throat shall be provided to suit termination of bus duct. Flange ends and inspection openings shall have weatherproof gaskets.

N Bushings

- i) Conforming to IS 3347 and IS 2099 for HT and IS 7421 for LT system.
- ii) Minimum rated current of line and bushings shall be 1.5 times rated current of the corresponding windings
- iii) Clamps and fittings made of steel or malleable iron shall be hot dip galvanized.
- iv) Bushings rated 400 Amps and above shall have non-magnetic clamps and fittings only.
- v) Bushing shall be solid porcelain type for LT system, solid porcelain / oil communicating type for voltage class upto 36 kV.
- vi) Porcelain shall be homogenous and free from cavities
- vii) Oil filled condenser type bushings should have the following:
 - Oil level gauge
 - Oil filling pipe and drain valve (if not hermetically sealed)
 - Tap for capacitance and tan delta test.
- viii) All clamps and fittings shall be hot dip galvanized.
- ix) No arcing horns should be provided on bushings
- x) Neutral bushings shall be provided as required for earthing of neutral point. This shall be connected to brass / tinned copper bar and brought to ground level through porcelain insulators.

O Bushing Current Transformers (Where applicable)

- i) CTs for back up earth fault shall be provided on the neutral end.
- ii) Removable at site without opening transformer tank cover/active parts.
- iii) Secondary leads shall be brought to a weatherproof terminal box and from there to the marshalling box with 4 sq.mm copper armoured cable.

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P Oil Temperature Indicator

150 mm dial type thermometer with manual reset maximum reading pointer. There shall also be two potential free contacts for alarm and trip signals. The alarm and trip settings shall be independently adjustable. The temperature-sensing element mounted in a pocket of oil, shall be connected to the indicator through capillary tubing. Contact rating at DC shall be minimum 0.5 amps.

Temperature indicator dials shall have linear gradations to clearly read at least every 2⁰C. Accuracy shall be better than +/- 1.5%.

Q Winding Temperature Indicator

- i) Local winding temperature indicator (WTI) for each winding, shall have a 150-mm diameter dial type indicator with a manual reset maximum reading pointer. There shall be two potential free contacts for alarm and trip signals. For transformers with forced cooling, another set of contacts shall be provided to start/stop the forced cooling system automatically. The settings for closing/opening of each contact shall be independently adjustable. Contact rating at DC11, 48 V DC shall be minimum 0.5 amps. The device shall be complete with lamp, sensing element, image coil, calibration device, auxiliary CTs etc. as required.
- ii) Temperature indicator dials shall have linear gradations to clearly read atleast every 2⁰C. Accuracy shall be better than +/- 1.5%.
- iii) Remote winding temperature indicator with resistance type temperature detector shall be provided additionally.

R Marshalling Box

- i) All outgoing connections from the transformer i.e. buchholz relay, temperature indicators, level indicators, CT secondary, fault contacts for annunciation etc. shall be wired to a marshalling box.
- ii) Degree of protection of enclosure shall be IP 55.

S Off-Circuit Tap Switch

- i) Externally hand operated with easily accessible links.
- ii) Designed for sustained over current of at least 150% of the rated current of the winding.
- iii) Shall not occupy any intermediate position between clearly marked tap positions.
- iv) Capable of repeated operation and withstanding short circuit forces.
- v) Tap position indication diagram
- iv) Inspection and/or repair shall not require removal of transformer core from tank.

A solid state facia window type annunciation system shall be provided for this purpose, with the following features:

- i) On incidence of fault – A hooter comes ON & window lamp starts flashing.
- ii) On acceptance of fault – Hooter stops, Lamp becomes ready.
- iii) On pressing RESET button – Lamp goes OFF if fault is removed.

Lamp continues to glow if fault persists.

The required alarm / trip contacts shall be wired to the marshalling box for connection to the annunciation system.

T Earthing

- i) All metal parts of the transformer with the exception of individual core laminations, core bolts, and clamping plates shall be maintained at fixed potential by earthing.
- ii) Two tinned copper earthing terminals with nuts, washers etc. to be provided at diagonally opposite corners suitable to connect 50x6 GI strip.
- iii) One end of bushing CTs shall be earthed.
- iv) Additional neutral to be connected by 75x12mm GI strip with support insulator.

U List of Fittings and Accessories

- i) Identification plate
- ii) Rating and diagram plates.
- iii) Valve schedule plate (For Power transformers)
- iv) First fill of oil as per IS-335, 1993 with 10% excess in non-returnable drums
- v) Cooling system complete with accessories (as specified)
- vi) Off-circuit tap switch (as specified)
- vii) OLTC (as specified)
- viii) Conservator with oil level gauge and drain plug.
- ix) Oil filling pipes with flange and dummy cover on conservator for filling/ topping up of oil.
- x) Suitable number of dehydrating breathers.
- xi) Double float Buchholz relay with alarm and trip contact and shut off valves on either sides.
- xii) Oil filter valves at top and bottom of tank
- xiii) Drain off valve at lowest location to allow complete draining
- xiv) Oil sampling device at top and bottom
- xv) Explosion vent with double diaphragm and oil level gauge between 1st & 2nd diaphragm (for distribution transformers).
- xvi) Pockets for thermometers for oil temperature and winding temperature indicators.
- xvii) Dial type magnetic oil level gauge with low level alarm contacts.
- xviii) HV, LV and neutral bushings.
- xix) Dial type winding temperature indicator with maximum reading pointer and alarm and trip contacts
- xx) Dial type oil temperature indicator with maximum reading pointer and alarm and trip contacts
- xxi) Lifting lugs and jacking pads. For transformers with bell tank design, lifting lugs shall be provided on core and winding also.
- xxii) Earthing terminals and lugs
- xxiii) Inspection cover
- xxiv) By-directional rollers with locking arrangement (for distribution transformers)
- xxv) Marshalling box.
- xxvi) Haulage holes.
- xxvii) Bushing CTs as specified.
- xxviii) Flat base & foundation bolts.

6.4 TRANSFORMER 6000 kVA, 33000 / 3300 kV

Supply of 6000kVA, 33000 / 3300 kV Oil type indoor Power Transformers with tap Links, manufactured as per relevant IS. The transformer shall be designed for the specification given below:

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Technical particulars (Power Transformer)

Sl. No.	Particulars		6000 kVA, 33/3.3kV
1.	Specification		IS 2026, Part I - 1977 Part II - 1977 Part III - 1981 Part IV - 1977
2.	Type		Three phase, core type, oil filled
3.	Duty		Outdoor
4.	Voltage HV/LV		33/3.3 kV
5.	Frequency		50 Hz
6.	No. of phase		3
7.	Continuous rating		6000 kVA
8.	Conductor		Copper
9.	Insulation class		Class A
10.	Cooling		ONAN
11.	Winding connection		Delta / Star
12.	Vector group		Dyn 11
13.	Neutral grounding		Solidly earthed
14.	System earthing	HV	Solidly earthed
		LV	Solidly earthed
15.	Percentage impedance		6.9%
16.	Termination	HV	Cable end box suitable for termination of 4 nos. 3C x 120 mm ² XLPE cable
		LV	Suitable for cable connection of 4 nos. 3C x 400 mm ² XLPE cable
17.	Temperature rise over 50°C ambient temp		
	a) Top oil (measured by Thermometer)		35°C
	b) In winding (measured by Resistance method)		45°C
18.	c) Hot Spot temp		55°C
	Bushing mounted CT's		
	a) LV Neutral bushing CT for EF class PS		1
	b) LV Neutral bushing CT for standby E/F protection class 10P15.		1

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Sl. No.	Particulars	6000 kVA, 33/3.3kV
19.	Tap changer	OLTC
	a) Range	+5% to -15%
	b) Total tap positions	16
	c) Voltage per step variation	1.25 %
	d) Tap change controls	Manual
20.	Impulse test withstand voltage	As per IS 2026, Part III – 1981
21.	One minute dry and wet power frequency withstand voltage	- do -
22.	Withstand time without injury for 3 phase short circuit at terminals	5 Secs.
23.	Auxiliary supply voltage	240 V AC
24.	Parallel operation	Suitable for parallel operation with transformers of similar ratings
25.	Overload capacity	As per IS 6600 –1972
26.	Radiators	Detachable type on the tank
27.	Flux Density	1.6 tesla (Max.)
28.	Magnetizing current	1% of rated current
29.	Paint	Epoxy
30.	Paint shade	Shade 632 as per IS – 5
31.	Short circuit level on HV side	450MVA
32.	RTCC Panel	With auto/ manual tap changing facility
33.	Control wiring	From switchgear to transformer

6.5 VCB PANEL

i) **Codes and Standards:**

The switchboards and the mounted equipment shall conform to the latest revisions of the following Indian standards:

IS:12729	General requirements for switchgear and control gear for voltages exceeding 1000 V.
IEC 62271-1	Common Specifications for Switchgear & Control gear
IEC 62271-100	Circuit Breakers
IEC 62271-200	A.C. metal-enclosed switchgear and control gear for rated voltages above 1kV and up to and including 72kV and the IEC Code herein referred
IEC 60129	Alternating current disconnectors (isolators)
IEC 60255	Electrical relays
IEC 60529	Classification of degrees of protection provided by enclosures
IS:13118	General requirement for circuit breakers for voltages above 1000 V.
IS:3427	Metal-enclosed switchgear and control gear for voltages above 1000 V but not exceeding 11000 V.
IS:5082	Material for data for aluminium bus bars.

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IS:9920	Switches and switch isolators for voltages above 1000V.
IS:9921	AC disconnectors (isolators) and earthing switches for voltage above 1000 V.
IS:9046	AC contractors of voltage above 1000V upto and including 1100 V.
IS:12661	HV motor starters.
IS:13703	Low voltage fuses.
IS:2705	Current transformers.
IS:3156	Voltage transformers.
IS:1248	Electrical indicating instruments.
IS:722	Integrating meters.
IS:3231	Electrical relays for power system protection.
IS:6875	Control switches and push buttons.
IS:694	PVC-insulated cables for working voltages voltage upto and including 1100 V.
IS:2544	Porcelain post-insulators for systems with nominal voltage greater than 1000 V.
IS:11353	Guide for uniform system of marking and identification of conductors & apparatus terminals.
IS:5578	Guide for marking of insulated conductors.
IS:3618	Phosphate treatment of iron and steel for protection against corrosion.
IS:6005	Code of practice of phosphating of iron and steel.
IS:5	Colours for ready mixed paints and enamels.

Wherever Indian Standards are not available, relevant IEC standards shall be applicable.

ii) General Requirement

Indoor Switchgear and control gear fully type tested according to IEC 62271-200 standards. The Circuit Breaker shall confirm to IEC-62271-100. Switchgear shall be type tested for internal arc 25kA for 1 sec. Switchgear shall also be tested for Seismic zone IV and type test report shall be furnished.

The design of the switchgear shall be based on safety to personnel and equipment during operation and maintenance, reliability of service, ease of maintenance, mechanical protection of equipment, interchangeability of equipment and ready addition of future loads.

The switchgear shall be of metal clad, single bus bar/Double bus bar as applicable, self-standing, dust proof construction, indoor cubicle type fitted with vacuum circuit breakers in fully draw out execution.

Circuit breakers shall be withdraw-able Vacuum type of cassette design. The complete assembly of interrupters contact pressure springs and HV terminals (top and bottom) shall be type tested for compatibility of design.

The Circuit Breaker shall be suitable for E2, M2 & C2 (Single capacitor Bank) class duty. The offered circuit breaker should have valid type tests to support the afore-mentioned duty class & other GTP parameters

VCB should be tested for Humidity test as per IEC 62271-100. As per IEC62271-200, the switchgear should be compliant to Partition Class Metallic (PM). It should be tested for Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

Internal Arc compliancy for 1 second for all individual compartment

The VCB shall be horizontally isolated, horizontally drawn-out type, truck mounted and ground operated.

The circuit breakers shall be suitable for following duties

- ⇒ To withstand inrush magnetizing currents of transformers and capacitor bank 'ON' and 'OFF' operation.
- ⇒ Transient surge produced by one CB due to severe chopping during rapid interruptions of inductive current e.g. motors, shall be within limits allowable for overhauled motors according to IEC34 part 1 otherwise suitable surge absorber shall be provided.

- The controls, indicating lamps, relays and meters shall be mounted on separate control & relay panel.
- Operation counter, close/open mechanical indications spring charged/ discharged indication shall be provided.
- All circuit breakers shall have motor operated spring charged mechanism for closing and shunt tripping coil (110 V DC). Closing coil shall be suitable to operate between 85% to 110% of rated voltage and tripping coil between 70-110% of rated voltage. Spring charging motor shall operate between 85-110% of rated AC. Voltage.
- Jumpers in the cubicle also shall be of same current rating as that of the breaker. Only the jumpers connected to CT shall be rated according to CT rating.
- A manually operated device to enable charging of closing springs.
- Manual / Mechanical tripping arrangement for emergency tripping of CBs.
- All circuit breaker truck shall have service, test and draw out positions. Test position shall engage only the auxiliary (control) contacts to close the CB during testing.
- Panel door switch shall be provided for illumination inside panel.
- Anti pumping feature shall be provided.
- All live parts shall be insulated by heat shrinkable sleeve only.
- The cubicle shall be provided with a position changing gear arrangement in such a way that by engaging detachable device from outside the front door, it shall be possible to move the breaker truck and change position without opening the cubicle door. Facilities for pad locking in each position shall be provided.
- Each cubicle shall have mimic diagram with metal strip.
- Each cubicle shall be of compartmentalized construction and shall have separate compartments for bus bars, CTs and outgoing cables, metering and protection devices.
- To ensure the integrity of the arc fault containment requirement, the operations must be carried out with the switchgear doors closed i.e. circuit breaker for opening and closing, racking of circuit breaker (or withdraw able voltage transformer) between service and test position.
- All circuit breaker trucks of same rating shall be identical in all respects (except metering and protective devices) and shall be interchangeable with similar breaker panel.
- Continuous earth bus shall be provided throughout the board.
- The position of various control switches, push buttons, and levers, etc. requiring manual operation shall be at a height not less than 450 mm and shall not exceed 1850 mm from the finished floor level.
- The switchgear shall have integral making type earth switch.
- Offered switchgear should be supplied with factory fitted exhaust duct for evacuation of plasma, arising out of an internal flash over.
- Switchgear should have provision for real time thermal monitoring for all the probable hotspots inside the switchgear. A minimum of 6 hot spot monitoring has to be offered for

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individual switchgear vertical. Display of the temperature can be done on a independent flush mounted HMI.

- iii) In the design of the switchgear the following positive interlocking shall be provided.
1. It shall not be possible to move the truck from the isolated to the Service Position unless low voltage plug and socket connections have been made.
 2. An electro-mechanical device shall be provided to ensure the auxiliary circuits have been securely connected between the fixed and moving portions of the switchgear, before allowing closing operation of the circuit breaker. The voltage rating of the device shall be the same as the voltage used for the closing circuit.
 3. It shall not be possible to disconnect the low voltage plug and socket as long as the circuit breaker truck is in service position.
 4. It shall not be possible to withdraw the truck without disconnecting the low voltage plug and socket.
 5. It shall not be possible to move the truck from the service to the isolated position or vice-versa with the circuit breaker in the 'ON' position.
 6. It shall not be possible to switch on the circuit breaker when the truck is in between the isolated and the service positions (except in test position).
 7. The switchgear shall have integral making type earth switch.
 8. The circuit breaker truck shall ensure earthing in both connected and disconnected positions.
 9. It shall be possible to switch on the earthing switch only when the truck is in the isolated position, wherever an integral earth switch is provided.
 10. It shall not be possible to open the circuit breaker enclosure when the breaker is ON or to have access to any part of the draw out assembly which is live when the circuit breaker is in the service position.
 11. Shutters shall be lockable in closed position.
 12. Where local/remote selector switches are called for , it shall be ensured that:
 - * The breaker can be closed locally only if the breaker truck is in the test position and the local/remote selector switch is in local position.
 - * The breaker can be operated from remote panel (in shop) only when the breaker truck is in service position and the local/remote selector switch is in remote position.
 - * The breaker can be tripped locally regardless of the position of the breaker truck.

iv) **Earthing Mechanism**

The operating mechanism parts shall be designed to give longer life, trouble free operation and require minimum maintenance.

The material and components shall have chopping current limited to minimum.

v) **Insulation Levels**

Insulation levels corresponding to the rated voltage shall be as follows:

Nominal voltage (kV)	33
Highest system voltage (kV)	36
One minute power frequency withstand voltage (kV)	70
1.2/50 micro sec impulse withstand voltage (kV)	170
Clearance in air	As per IEC

vi) **Short Circuit Strength**

- Rated short time withstand current shall not be less than the system short circuit level specified

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for the stipulated duration.

- Rated peak withstand current shall not be less than 2.5 times the system short circuit level.

vii) Auxiliary Buses for Control & Protection

1. Control supply buses for AC & DC.
2. Signaling supply.
3. PT secondary voltage.
4. Spare buses.

viii) Provision of surge suppressor

In case of breakers like VCB that give rise to over voltage surges due to current chopping phenomenon, surge suppressors to be provided at the load side terminals of the breakers to limit the switching surges to value limited for as per IEC.

ix) Annunciation Schemes

- Flag indications for all faults for which individual protective relays have been specified.
- Warning signalling (as applicable) on individual panels:
 - a) All transformer warning / signalling conditions (group signal from corresponding transformer control panel / sub-station
 - b) Loss of trip circuit supply
 - c) Earth fault.
 - d) Control supply failure
 - e) PT fuse failure / MCB tripping
- Emergency signalling for tripping of HT breakers on fault
- One common signal for warning and one signal for emergency from each panel to be wired to a common annunciation panel of the switchboard, where specified.
- Annunciators for warning and emergency signaling condition on individual panels of solid state facia window type. Common audio signaling with Accept, Reset, and Test push buttons for the switchboard where common annunciation panel is not specified. Audio signaling to have distinct tones for warning and emergency.

x) Bus Bar and Connections

- Power buses shall be of EC grade Copper. Both rectangular and Round busbar are acceptable. The busbars shall be tinned /silver plated at joints.
- The continuous rating of the main horizontal bus shall not be less than the rating of the incomer specified.
- *The vertical bus rating shall be as follows:-*

incomer	:	Not less than that of horizontal bus
For outgoing	:	Not less than that of the outgoing breaker, irrespective of relay setting.

- Design ambient temperature shall be 50°C & final operating temperature under continuous operation in enclosure shall be as per IEC 62271-200.
- Both horizontal and vertical bus bars to be designed and supported to withstand the thermal and dynamic stress corresponding to rated short time and peak withstand current specified.
- Cross-section of main horizontal bus to be uniform throughout the switchboard and continuous in one transport unit.
- Bus bar arrangement as per IS 375.
- Phase identification by colour in each panel.
- Bus bars (horizontal as well as vertical) shall be provided with heat shrinkable, non tracking, low absorption type sleeving conforming to international standards for full voltage for 33 kV,

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11kV& 3.3kV switchboards.

- Bus bar support insulators of non-hygroscopic material having high impact and dielectric strength with an anti tracking contour.

xi) Internal Control Wiring

- Control wiring shall be carried out by 1100V grade PVC insulated; single core multi stranded copper wire of minimum cross section 2.5 sq. mm. Similarly, for CT circuits minimum cross section of 2.5 sq. mm shall be used.
- Flexible wire of 2.5 sq.mm shall be used from CT chamber to relay chamber and shall have protection against heat and mechanical damage due to flash over. Use of heatproof sleeves and rigid conduit shall be made to run the control wires from back to front.
- Wiring and terminal arrangement for all panels shall be carried out as per approved scheme.
- Flexible wires protected against mechanical damage for wiring to door mounted devices.
- Wires identified at each end in accordance with schematic diagrams by interlocked type ferrules. These shall be firmly located so that these do not move.
- *Colour code for control wiring*

AC – Black	Earth wire – Green
DC – Light grey	Trip circuit – Red

- All telemetering signals shall be wired to terminal strips.

xii) External Terminations

Control Terminations

- 650V grade multi-way open type terminal blocks of non-tracking moulded plastic complete with insulated barriers, stud type terminals, washers, nuts and lock nuts and identification strips.
- All terminals going out of the switchboard shall be brought to a separate terminal board marked "External Termination". These will be easily accessible.
- External terminal block shall be provided in the relay chamber with proper clamping facilities for cable dressing.
- Control terminals shall be suitable to receive two numbers 2.5 sq. mm copper conductor.
- 20% spare terminals in each control terminal block. Terminal blocks in separate groups shall be provided for DCS/PLC, remote control panels, transformer marshalling boxes, local push button stations, etc.
- Gland plate for control cables shall be of adequate size to accommodate and to facilitate glanding of all the control cables coming from external equipment.
- Terminal blocks shall be placed separately for internal looping and external looping.

xiii) Power Terminations

- Suitable for accepting cable/bus trunking as specified.
- Sufficient space and support arrangement inside each panel to accommodate HT cable termination kits and sealing kits suitable for the size and number of XLPE cables. Dummy panels to be provided adjacent to the switch panel, where the required number cable terminations cannot be accommodated in the cabling chamber of the main panel. Rear extension not acceptable.
- Where more than one cable has to be terminated per unit, the arrangement shall permit connection and disconnection of cables separately without disturbing other cables.
- Push – ON type/Heat-shrinkable type cable end terminations / straight-through jointing kits shall be used wherever required.
- Where specified the following cable termination accessories, suitable for the type, size and number of cables to be terminated, to be supplied with switchboard.

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- ⇒ Cable sockets with all HT terminals(sockets set at such an angle that cable tails can be brought up for termination with minimum bending and setting)
- ⇒ HT cable termination and sealing kits
- ⇒ Power cable termination facilities shall be designed to facilitate easy approach to CTs.
- ⇒ Double compression type brass cable glands and crimping type tinned heavy duty copper lugs for HT, LT power and control cables.

xiv) Protection and Measurement

a) Electrical Protection

Selection of protective scheme will be based mainly on reliability, sensitivity, selectivity. All main protections shall be fast acting type in order to clear the faulty system from the healthy system in earliest possible time to minimise damage to equipment and ensure continuity of power supply.

b) Protective scheme requirement

- All the main protective relays shall be microprocessor based numerical and communicable type.
- Auxiliary relays, timers switches, etc. required to make the scheme complete shall be considered as part of the scope of work.
- All CT-PT shall be suitable for the relay-meter requirement - lead burden
- All CT-PT wires shall be brought to test terminal blocks before connecting to circuits.
- The circuits of various protections (coming from other panels) shall be connected to master trip relays through auxiliary relays (flag indicated).
- VAA type auxiliary relays shall be provided for each transformer fault. Connection of the relay shall be through links to facilitate maintenance.
- Relay ranges and scale of meters shall be finalized during drawing approval stage.
- Contact arrangement, number of poles/ways in control/selecter switches shall be as per the requirement/approved scheme.
- ICTs whenever considered necessary shall be included in the scope
- For control supply distribution, panel to panel separate set of terminal blocks shall be provided at top of the panel. All items / accessories required for above in each panel and in incoming panels shall be provided by the supplier.
- All relays shall be hand/self-reset type with flag indication. NO/NC contacts for relays shall be as per the requirement of approved protection, annunciation and interlock schemes. Wherever required supplier shall provide auxiliary relays for contact multiplication.
- Annunciation facia shall be mounted on Incomer switchgear panels and details shall be finalized during drawing approval stage.
- Centre line of switches, lamps, meters shall be matched to give uniform appearance and mounting height of switches shall be between 1.1 - 1.8 m.

xv) Current Transformer (Panel Mounted)

- Separate sets of current transformers shall be used for differential protection and separate cores shall be used for, over current protection and measurement purposes. CT's on incomer side shall be mounted before incomer breaker and CT's for outgoing feeder shall be mounted after the breaker.
- Short time ratings and insulation level of CT's shall be similar to rating of associated breaker.
- CT ratios specified are provisional. Where outputs and accuracy are not specified, these shall be such as may be required by the circuits in which they are used. Generally, the protection CT's and metering CT's shall have 5P20 and 0.5 class respectively.

- CT's shall be bar/ window primary type.
- CT's shall have shorting link on secondary side to facilitate insertion of meters on secondary side without opening CT circuits.
- CT Ratio shall be as marked on the Single Line Diagram attached with this Specification.

xvi) Potential Transformers

- Fixed type line PT mounted in separate panel shall be acceptable. However, if line PT is located in incomer breaker panel, draw out type PT shall be considered.
- High voltage side of PTs shall have fuses and MCCB's on low voltage side
- Low voltage star winding shall have all three phase and neutral connections brought out to terminals and one phase shall be earthed.
- Insulation levels shall be similar to rating of associated board.
- Accuracy class 1.0 shall be used.
- VA burden shall be selected based on meters and relays connected with the PT.

xvii) Relays

- Relays shall be Microprocessor based numerical and communicable type. Protocol for communication shall be IEC 61850.
- All relays shall be flush mounted in dust proof cases and shall be mounted on front side of cubicle.
- The module shall be either draw-out/Fixed type with withdrawable cards and there should be CT shorting facility. Galvanic isolation between field connection and relay hardware should be there. The relays should be housed in a robust metal case suitable for panel mounting conforming to IP 51 or higher (Front face). The relay shall have Web HMI feature.
- The relay shall have a second Ethernet port for providing connectivity of any other Ethernet device to an IEC 61850 station bus inside a switchgear bay.
- The relay must support, besides native IEC 61850, simultaneous communication using one of the following communication protocols: Modbus® (RTU-ASCII/TCP), IEC 60870-5-103 or DNP3 (serial/TCP).
- Major relays are as indicated in the specification or single line diagram.
- Master trip relay shall be hand reset and shall have 3 NO and 3 NC contacts in addition to those required by the protection/control scheme.
- All timers and protection relays shall have flag indicators.
- Relay ranges, exact type, number of aux. relays, timers shall be finalized during drawing approval stage.
- All instantaneous current protection relays shall be of 3 pole type.
- All PCB used in relays should have harsh environmental coating as per standard IEC 60068 (HEC) to increase the particle repellence and thereby increasing the life of relay or it should be tested as per IEC60068 to operate under extreme harsh environmental conditions given in G3. Test report needs to be submitted on request. IED shall be manufactured using lead-free components.
- The relay shall be provided with suitable security (Password protection) against unauthorised WRITE ACCESS for change in relay setting. However, it should be possible to view metering, protection settings, status and event data as READ ONLY without password protection. The security should be available for change in relay settings locally from relay HMI as well as when relay is accessed remotely through manufacturer software / remote HMI.
- The relay should have time synchronization through SNTP / IRIG-B
- **Fault record:** The relay shall have the facility to store at least 8 last fault records with information on cause of trip, date, time, trip values of electrical parameters.

- **Event record:** The relay shall have the facility to store at least 250-time stamped event records with 1 ms resolution.
- **Disturbance records:** The relay shall have capacity to store at least 50 disturbance record waveforms. The relay shall have a disturbance recorder supporting a sampling frequency of 32 samples per cycle and featuring up to 12 analog and 50 binary signal channels.
- Event log, trip log and disturbance record should go in history. The relay settings shall be provided with adequate password protection with 4 alternative setting groups.
- The numerical relays shall be provided with 1 set of common support software compatible with both Windows 98/ NT 4.0/ 2008/ Windows 7/ Windows 10 or higher, which will allow easy settings of relays in addition to uploading of event, fault, disturbance records, measurements and troubleshooting purposes.

xviii) Indicating Instruments

- All indicating instruments shall conform to IS: 1248-1983 and IS - 2419-1979.
- Shall be capable of withstanding system fault current taking into account CT saturation.
- Shall be back connected.
- Shall be located in the upper part of the panel.
- Shall have 96 sq. mm square flush case, non-reflecting type, clearly divided and indelibly marked scales, sharply out lined pointers and zero adjusting device.
- The minimum scale reading shall not be more than 10%. Maximum reading shall be 150% full load for transformers panels.
- Each voltmeter shall be calibrated with coil hot. The scale shall be open between 60% to 125% of normal volts and shall be suppressed below 60% of normal volts.
- Class of accuracy shall be 1.0 or better.
- The full load reading of each ammeter shall occur at the most prominent part of the scale. The minimum scale reading shall not be more than 10%. Maximum reading shall be 150% full load for transformer panels and 600% full load for motor panels.

xix) Annunciators

- Shall be of static type.
- Hooter and bell for trip and alarm indication respectively.
- Shall be suitable to work on DC supply as specified.
- Test, accept and reset facilities (with push button) shall be provided on each panel.
- Suitable audio - visual indication shall be provided on DC failure. Audio alarm with reset facility shall be provided. Visual indication shall be panel- wise.
- Spare annunciation points shall be wired upto terminal blocks. 20% spare facias shall be provided.
- Each point shall have two bunch LEDs in parallel.
- All trip points facia shall have red colour and non trip points white colour.
- The cover plate of facia shall be flush with panel
- Shall be capable to receive simultaneous signals
- Shall be capable to receive signal during testing mode
- Scope of supply includes all interconnections, bell hooter, buzzer, alarm facility, push button etc. required to achieve complete function of above scheme.
- Sequence shall be as follows:

	Visual	Audio
On occurrence of fault	Lamp flashing	on
On acceptance	Lamp steady "on"	off
On reset	Off	off
On test	Lamp flashing	on

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- Annunciation in the switchboard shall have following provisions:
 - Each transformer & other feeder shall have 12-way uniform facia.
 - Each bus PT shall have 12-way uniform facia.
- Bus coupler or tie shall have sufficient facia (for each feeder to indicate tripping +20% spare)
- One common point shall be provided to indicate operation of annunciation system of the complete board (in case of any trouble in the board in tie feeder, bus coupler, incomer etc.)
- All auxiliary relays of transformer feeders shall have 4 NO contacts all master trip relays shall have 2 NO contacts for remote/DCS/PLC indication for repeat annunciation in addition to contacts required for scheme under scope of works.

xx) Control supply

- Control supply buses shall run throughout the switchgear.
- Two DC feeders shall be taken in each board controlled by MCCB's.
- In each panel for controlling of its DC supply MCCB (DC duty) shall be used. DC auto changeover and manual changeover facility shall be provided. Failure of DC supply shall be monitored in the switchboard as well as at remote.
- 240V AC shall be taken from station aux. board.
- Each section shall have separate feed with automatic change over scheme.
- Each panel shall have one MCB for controlling its AC supply.
- Sub circuits shall be protected with HRC fuses/ MCB in each panel for indication lamps, closing & tripping circuits.

xxi) Earthing Devices

- Either integral earthing switch or a separate earthing switch shall be provided to facilitate earthing of busbars and any feeder circuit.
- Earthing truck (if included) shall have PT and alarm provision. (Separate trucks shall be provided for feeder and bus earthing through bus PT panel in each switchboard). One no. earthing truck for feeder earthing and one no. for busbar earthing shall be provided for each board. It shall not be possible to use bus-earthing truck for feeder earthing and vice-versa.
- Rating of earthing device shall be in line with associated board.
- Interlock provision shall be there so that incomer cannot be closed if bus-earthing device is connected.
- In case feeders are having integral earth switch, earthing trucks may not be required.

xxii) Control and Selector Switches

- Control switches for circuit breaker ON/OFF control - 3 position spring return to neutral with lost motion device and pistol grip handle.
- Other control and selector switches - stay put type with wing type knobs.
- Ammeter selector Switches- 4 position, make before break.
- Voltmeter selector switches- 7 positions as required.
- Colour : Black
- Contact Rating:

Continuous	10 amps
AC11	4 amps, 240V
DC11	0.5A, 110V, L/R- 40ms.

xxiii) Push buttons

Contact Rating

Continuous	10 amps
AC11	4 amps, 240V
DC11	0.5A, 110V, L/R- 40ms.

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Color:

ACCEPT	BLUE
RESET	BLACK
TEST	YELLOW

xxiv) Control Circuit Fuses:

HRC link type confirming to IS 9224-1979.

xxv) Protective Earthing

- Continuous earth bus of minimum size 50x6 mm of copper or equivalent aluminum/galvanized steel section, designed to carry the peak short circuit and short time fault current as specified.
- Provided at the bottom extending throughout the length of the board, bolted/brazed to the frame work of each panel with an earthing terminal at each end for terminal at each end for terminating external earth conductor.
- Vertical earth bus for earthing individual functional units.
- Hinged doors earthed through flexible earthing braid.
- Looping of earth connection resulting in loss of earth connection to other devices when the loop is broken not permitted.
- Withdrawable units provided with self aligning, spring loaded, silver plated copper scrapping earth contacts of make before/break after type, ensuring earth continuity from service to the test position.

xxvi) Test and Maintenance Equipment

Each board to be supplied with 1 set of test plugs.

xxvii) Constructional Features

Mechanical Design

- The switchgear and control gear panels shall be of the fully arc proof, free standing, floor mounting, flush fronted, withdraw able type, consisting of separate panels assembled into one or more sections to form a single structure with a common bus-bar assembly. All 3 compartments (Busbars, Circuit breaker & Cable compartment) shall be tested for Internal arc for the said rating.
- Internal arc should be valid also at the rear side of cubicle.
- The panels shall be constructed from prime quality folded and riveted CRCA /Aluminium Zinc coated steel sheet or pre-galvanized sheets of 2 mm thickness. Load bearing members to be constructed using sheets of 2.5 mm. Only doors and end covers shall be painted with paint shade as specified.
- The observation window on the CB compartment door shall be made of special toughened/ laminated glass substantiated in type test reports as proving it arc proof. Observation window shall be of same material and construction as the type tested design/construction as specified in IEC.
- The design of the panels shall be such that no permanent or harmful distortion occurs either when being lifted by eyebolts or when moved into position by rollers or trans-pallets.
- Each cubicle shall be equipped with anti-condensation heater controlled by thermostat.
- Sheet steel clad, compartmentalized, floor mounted, free standing design.
- Doors shall be provided with lock and key arrangement
- Degree of protection shall be IP4X.
- Assembled on base channel of structural steel ISMC 75 painted black.
- Operating height shall be between 450 to 1800 mm. Switchboard height not to exceed 2500 mm.
- Earthed metallic barriers between compartments and between vertical sections.
- Seal off bushings wherever bus bars pass through metallic partition.

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- Lockable front doors with concealed hinges with door not forming part of the draw-out truck.
- Panels shall be extensible on both sides.
- Removable sheet steel covers shall be provided at rear.
- Control cables entry shall be from front side.
- CTs shall be located in such a way that they are easily accessible.
- Panel door switch shall be provided for illumination inside the panel.
- All live parts shall be insulated by taping, supported by suitably designed insulators. Proper insulation of bus bars, upper and lower contacts of breakers and sealing of opening of bushings shall be provided to eliminate accidental contacts.
- Screw wire mesh in the power cable chamber of incoming feeder is to be provided.
- Metal cubicles shall be divided in the following compartments.
 1. Bus bar compartment
 2. Circuit breaker compartment
 3. Cable compartment
 4. LV compartment
- The switchboard shall have passed internal arc faulted containment testing for each compartment for 1 second at the rated fault current of 25 kA
- Each HV compartment should have individual exhaust channel / pressure relief flaps to let out over-pressurized hot gases at the top of the switchboard in the event of an internal fault. Suitable factory fitted arc duct arrangement shall be provided for venting out the arc out of the switchgear room.

6.6 INDOOR 33 kV HT VCB PANEL

This includes, Design, fabrication, supply, installation, testing and commissioning of HT panel indoor 33 kV, 1250 Amps, 3 phase, 50Hz, 31.5kA VCB for 3sec.

Incoming Feeder with PT:

This includes supply at site, Vacuum Circuit Breaker, suitable for 33kV, 31.5kA, 1250A, 500MVA, 3 Phase, 50 HZ effectively earthed, neutral system comprising of proper housing of breaker, safety shutters, isolating plugs and socket, Cassette type VCB trolley with 3 nos. Vacuum Interrupters with safe aligning finger type, isolating contacts suitable for vertical/horizontal isolation and horizontal draw out. Necessary control Protection and metering circuits are completely assembled, wired and enclosed in a weather and dust proof cubicle. 02No.(two) Breaker handling trolley at each substation shall be provided.

The HT Panel shall be made of sheet steel enclosure, dust and vermin proof, suitable for indoor use. This shall be suitable to receive power at 33 kV, 50 Hz, 3 phase AC with all equipment fittings and accessories for efficient and trouble-free operation.

- a) 33kV, 1250A VCB The self-tripping mechanism with numerical relay with IDMT, over current, earth fault and Instantaneous protection including TVM, MFM and all others panel's indications lamps.
- b) Incoming cable entry box shall be provided for the required cable entry.
- c) Insulation level
 - i) 1.2/50 microsecond Impulse withstand voltage 170kV peak
 - ii) One minute power frequency withstand voltage 70 kV rms
- d) Rated current
 - i) Continuous
 - Bus bar 1250 A
 - Incoming/outgoing circuit breaker 1250 A
 - ii) Short time current for 3 seconds 31.5kA rms
- e) Circuit breaker
 - i) Rated breaking capacity Symmetrical. 31.5 kA / 3 Sec.
 - ii) Rated making capacity 82 kA

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iii) Total breaking time

7 cycles maximum

iv) Operating sequence

As per IS/IEC

- f) Type of charging: Manual as well as motorized mechanism with 230V AC operated motor.
- g) Make: As per the list of makes enclosed herewith.
- h) Shunt trip coil : 110 V DC
- i) Closing coil : 110 V DC
- j) Busbar chamber with Copper busbars, heat shrinkable PVC sleeved/ powder coated with colour code. The busbars shall be of high conductive electrolyte copper.
- k) 230VAC space heaters with ON-OFF switch and thermostat.
- l) 1phase, resin cast with fuse unit, draw out, line connected PT ratio of 33000/ $\sqrt{3}$ /110/ $\sqrt{3}$ Volts of 100VA burden to meet with auxiliary power requirement of metering and protection. Having accuracy of 0.5/3P.
- m) Epoxy cast resin CTs with 15VA burden, STR of 31.5 kA for 1 sec., metering accuracy class 0.5 and protection accuracy 5P20 and having of CTR 400-200/1-1A **(to be finalised during detail engineering)**.
- n) The Trivector meters shall be digital type of approved make and it should display Amps, Volts, kVA, kW, kWhr, kVAR, PF and MD etc. The meter shall provide with external port for remote monitoring.
- o) The Multi-Function Meter (MFM) shall be digital type of approved make and it should display Amps, Volts, kVA, kW, kWhr, kVAR, PF, Frequency and etc. The meter shall provide with external port for remote monitoring.
- p) Breaker ON-OFF LED indicating lamp.
- q) Circuit trip/healthy indicating LED lamp with pushbutton.
- r) Breaker spring charged LED lamp indication.
- s) TNC (Trip Neutral Close) switch.
- t) Numerical relays consist of IDMTL + Inst 3 O/C + Inst E/F relay.
Trip circuit supervision & master trip. All relays shall be SCADA enabled with event/data logging features. Operating handle, spring charging handle & other required accessories shall be supplied.
- u) Cable box suitable for receiving single length of 2Rx 3C x 240 Sq. mm HT XLPE cable.
- v) Hand held lamps for panel internal illumination shall be provided with 240V AC source.
- w) Hooter for tripping.
- x) 110V DC external supply shall be provided for control circuit of complete breaker operation.
- y) Bus bar support insulator:-Non hygroscopic, track resistant, high strength insulator. (Calculation for validating dynamic force withstands capability to be submitted during drg. Approval)
- z) Thermostat controlled space-heaters to be provided in bus bar, CB and Cable compartments.

• **Outgoing Feeder (without PT):**

Technical Specification same as Incoming feeder but without PT.

Numerical relays consist of IDMTL + Inst 3 O/C + Inst E/F relay.

Trip circuit supervision & master trip. All relays shall be SCADA enabled with event/data logging features.

The Multi-Function Meter (MFM) and trivector meter shall be digital type of approved make and it should display Amps, Volts, kVA, kW, kWhr, kVAR, PF, Frequency and etc. The meter shall provide with external port for remote monitoring.

Epoxy cast resin CTs with 15VA burden, STR of 31.5 kA for 1 sec., metering accuracy class 0.5 and protection accuracy 5P20 and having of CTR 400-200/1-1A **(to be finalised during detail engineering)**

• **Outgoing Feeder (Transformer):**

Technical Specification same as Incoming feeder but without PT.

Numerical relays consist of IDMTL + Inst 3 O/C + Inst E/F relay + Differential + REF .

Trip circuit supervision & master trip.

All relays shall be SCADA enabled with event/data logging features.

The auxiliary relay for transformer feeder shall be provided.

Job includes providing 12C copper control cable from transformer -WTI/OTI, Buchholz, NCT etc. to HT panel.

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The Multi-Function Meter (MFM) shall be digital type of approved make and it should display Amps, Volts, kVA, kW, kWhr, kVAR, PF, Frequency and etc. The meter shall provide with external port for remote monitoring. Trivector meter not required.

The VCB shall be complete with necessary interconnection with fine feruled wiring, foundation bolts, earthing, etc. The VCB shall be supplied to conform to relevant IS, amended up to date, along with manufacturers test certificate. Required no. of Danger board /Stickers of HT voltage in two languages English/Hindi is to be provided on the panel.

Epoxy cast resin CTs with 15VA burden, STR of 31.5 kA for 1 sec., metering accuracy class 0.5 and protection accuracy 5P20 and having of CTR 200-100/1-1A and 200-100/1-1A **accuracy class-PS for REF & Diff. protection(to be finalised during detail engineering).**

The necessary approval of the drawing of VCB panel shall be obtained from HDC before fabrication. Panel shall be connected with earthing as per IER.

Earthing truck :-

Bus and cable earthing truck to be provided. (Separate trucks shall be provided for feeder and bus earthing through bus PT panel in each switchboard). One no. earthing truck for feeder earthing and one no. for busbar earthing shall be provided for each board.

Breaker handling trolley:-

2Nos. breaker handling trolley to be provided.

6.7 INSTALLATION OF INDOOR HT VCB PANEL:

This includes installations, testing and commissioning of VCBs at 33kV sub-station VCB with P.T. as incomer and without PT as outgoing feeder.

All the VCB's shall be erected by using suitable size of GI. channel foundation bolts including grouting of the bolts of each VCB panel. Each panel shall be connected with separate and distinct Earthing. After installation of VCB panel, necessary test and trial are to be carried out for proper functioning of safety, devices, relay etc. and before charging VCB all the tests required under relevant ISS and IEC – Rules 1956 shall be carried out and the result shall be in conformity with specifications and copies of test results shall be furnished to EIC. The work includes all Labour & materials required for installation & commissioning of VCB and shall be done as directed by Engineer.

Tentative layout:-

a) Master control sub-station:

O/G-Spare	Spare transformer outgoing feeder	I/C-1 From Intake sub-station	O/G-TR-1	Bus-coupler	O/G-TR-2	O/G-TR-3	I/C-2 From Intake sub-station	O/G Feeder
1	2	3	4	5	6	7	8	9

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6.8 BATTERY BANK, BATTERY CHARGER AND DCDB

➤ TECHNICAL SPECIFICATIONS OF BATTERY

The 110V DC Battery Bank should be consisted of 55 Nos., 2 V (Maintenance free, Lead Acid type), 180AH for providing 3Hrs. continuous back-up. The **Battery Bank** should be complete in all respect and equipped with all necessary accessories like, **Inter-cell Connectors (Copper)**, **Connecting Leads**, etc. The spares / attachments, which are meant necessary for the smooth functioning of the equipment and specially are not mentioned here shall be assumed to be included in the scope of supply.

Battery racks suitable for accommodating 55 cells should be supplied & installed by the Contractor. The racks should be made of wood and to be so designed and placed as to permit easy handling of the cells while in operation.

The wooden battery racks should have acid resisting and flame proof coating.

➤ TECHNICAL SPECIFICATIONS OF BATTERY CHARGER:

ii) The **Battery Charger**, to be used for charging **110 V Battery Bank**, should be of **Float-cum-Boost Charger** Type, having provision for **auto Changeover** from **Boost to Float & vice-versa** and following Technical features:-

- a) Should be suitable for Indoor installation and to be supplied with all accessories.
- b) Should have facility to regulate the Battery Charging current and output voltage as per requirement (to be indicated by the Manufacturer of the Battery Bank) and limiting the total current within the maximum capacity of the charger.
- c) Should have provision for automatic switching to ensure different applications of both 33 kV & 3.3kV Panels to be installed at the existing Substation at Haldia. Suitable control arrangement is to be provided to ensure that output DC voltage is always within the limits specified, even if the cell voltage is high.
- d) Should be suitable for operation in **Manual Mode**, besides the **Auto Mode**. Suitable device is to be provided for adjusting charging current and voltage when the charger is to be operated in Manual Mode.

iii) **Other Technical Particulars :**

a) **Output Voltage:**

Nominal: 110 V DC

b) **Charging Current :**

Maximum continuous output current: 16 Amps

Maximum continuous DC Load: as per requirement.

Maximum Battery Charging Current: to be indicated by the manufacturer of the Battery Bank.

c) **Type:** Solidstate, both Auto & Manual Control.

d) **Input Voltage:** 230 V – 250V A.C., Single Phase.

e) **Input Frequency:** 50 Hz \pm 5%.

iv) **Protection :**

a) The charger shall be protected against following conditions with provision of delayed protective and / or indicative action as per scheme requirement.

b) Input Voltage Surge.

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- c) Input over / under voltage.
 - d) Output over / under voltage / short circuit / over load.
 - e) Earth fault in + ve and – ve D.C. output.
 - f) Battery reverse polarity.
- v) **The Charger shall incorporate the followings :**
- a) MCB for incoming / outgoing supply
 - b) HRC / glass cartridge / semi conductor fuses for different circuits. All fuses shall be properly labelled for proper identification.
 - c) Surge Arrestors.
- vi) **Indication :**
- The charger shall be provided with following LED indications to identify abnormalities through incorporation of suitable scheme.
- a) Mains ON
 - b) Output ON
 - c) Input over / under voltage and power supply fail.
 - d) Output over / under voltage.
 - e) Earth Fault
 - f) Battery reverse polarity
- All indicating LED lamps, switches, control knobs, terminal blocks, etc., shall be properly labelled for easy identification.
- vii) **Meters:**
- Following meters with selector switches shall be provided to measure the following:
- a) Analogue Ammeter. of appropriate scales with Selector Switch for measuring battery float / boost charging current and output current.
 - b) Analogue Voltmeter of appropriate scales with Selector Switch for measuring battery and output voltage.
 - c) Analog Voltmeter for measuring input AC Voltage.
- viii) **Control:**
- Following controlling arrangement shall be provided for different functions of battery charger:
- a) AUTO/MANUAL Selector Switch
 - b) Manual operation controlling device
 - c) Mains ON
 - d) Output ON
 - e) Voltmeter Selector Switch
 - f) Ammeter Selector Switch
- ix) **Enclosure:**
- The chargers shall be enclosed in floor mounted type enclosure with provision for proper ventilation.

- x) **Two sets of Instruction Manuals for Erection, Operation & Maintenance, two sets of Drawings for Equipment Details and two sets of Circuit Diagram** should be submitted along with the above Battery Charger unit.

➤ **DCDB Technical Specification.**

A) Rated Voltage:

Rated voltage for the Distribution Board and its constituent items like Switch Fuse Disconnecter unit, MCBs, busways etc. shall be single phase 2 wire D.C. 110 volts. The supply voltage may vary by $\pm 10\%$ of rated voltage. All the equipment used in the Board shall operate satisfactorily at this voltage variation.

B) General Requirements:

Each Distribution Board shall be free standing floor mounted having compact design. The Board shall be closed, dust protected, weather proof and shall be made vermin proof with a special type lining e.g. Neoprene gasket, around the edges of the doors. The distribution board shall comply degree of protection IP 43. MCBs shall be operating vertically upward for ON/OFF operation. The entire distribution board shall have uniform finish and shall be sturdy. The distribution boards shall be of modular construction with provision for complete compartmentalisation of all feeders. It shall be free-standing, dead front type comprising dust-tight and vermin proof sheet steel cabinets suitable for indoor installation. The doors of cabinets shall be lockable. Handle shall be made of reputed make. The DB shall be provided with double door in front having 2 nos. hinges which should be suitable for movement of 120 degree and 2 no. knobs to be provided on the door corners. All instruments and control devices shall be mounted on the front of cabinets and fully wired to the terminal blocks. All switches provided on the distribution board shall be on front side of the cabinets, operable from outside.

Each Distribution Board shall be made out of at least 2.0 mm thick cold rolled steel sheet, suitably reinforced to provide flat level surface. Size 1000(H) x 750(W) x 300(D) mm. Gland plate shall be 3.0mm thick. No welds, rivets, hinges or bolts shall be visible from outside. The doors shall be fitted with double leaf neoprene rubber gaskets.

All cables shall enter and leave from bottom. Suitable cable terminal blocks with cable lugs shall be provided inside each cabinet for the incoming and outgoing cables. The terminals shall be serially numbered to facilitate installation and maintenance. Main busbars shall be accommodated in busbar chambers and cable alleys arranged by their side. Compression type cable glands shall be provided to hold the cables to avoid any pressure or tension on the terminal block connections. The terminal blocks shall be easily accessible for inspection and checking. Panels shall have cable supports and metallic clips for supporting power and control cables for internal wiring of the panels.

The DC Distribution Board shall have double bus arrangement with change over switch. The Distribution Board shall have provision for one set of +ve and -ve connected to Charger-1 and another set of +ve and -ve connected to Charger-2. Each busbars shall consist of tinned electrolytic copper of cross-sectional area of a minimum of 25mm x 3mm, suitable for carrying their rated continuous current without their temperature exceeding 85 deg C. The busbars shall be continuous throughout each section. The busbars shall have current rating to suit the requirements corresponding to the loads incident thereon under the various operating conditions and shall withstand the applicable voltage and maximum short circuit stress. The busbars shall be insulated from supporting structure by means of durable non-hygroscopic, non-combustible and non-tracking polyester fibreglass material or porcelain. Busbars shall be encased in heat-shrunk sleeves of insulating material which shall be suitable for the operating temperature of busbars during normal service. The busbar joints shall be provided with removable thermosetting plastic shrouds. The busbars shall be housed in totally enclosed busbar chambers. The incoming connections from the busbar to the various feeders shall be so designed as not to disturb cable connections and to ensure safety to the operating and maintenance personnel and to facilitate working outside any outgoing module without the need for switching off in-feed to the adjacent modules, as far as possible. The busbars shall be of high conductivity, adequate uniform cross section and current density shall not be more than 1.6 Amp/sq. Mm. A cable alley preferably 230 mm wide shall be provided in each vertical section for taking cables into the compartments.

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All doors shall be provided with mechanical interlocking arrangements along with keys. The distribution board shall have no door on rear side.

Danger board (Caution Plate) shall be fitted suitably on inner door of the DB.

The DC boards shall be provided with the following equipments wherever applicable:

- i. Double bus arrangement with change over switch with provision for one set of +ve and –ve connected to Charger-1 and another set of +ve and –ve connected to Charger-2. Each busbars shall consist of tinned electrolytic copper of cross-sectional area of a minimum of 25mm x 3mm.
- ii. Terminal arrangement with necessary equipment for connecting the incoming supply.
- iii. Voltage and current measurement in the incomer feeder.
- iv. Outgoing modules with switch / MCB units of adequate capacity for the outgoing feeders and 20% spare feeder units of each rating.
- v. Necessary cable glands and terminal blocks.
- vi. Adequate number of spare terminals on terminal blocks for receiving connections for external connections.
- vii. The number of outgoing feeders from DC boards shall be such that each substation equipment is fed by separate feeder with 20% as spare.

The ventilating louvers should be covered from inside by a perforated sheet.

All sheet metal used for DB shall undergo seven tank mechanical/ chemical cleaning process & painting shall be done using powder coating process. Colour of the Paint shall be admiral gray as per shade no. 632 of IS 5 on exterior and white from interior sides.

C) MAJOR COMPONENTS:

Incoming cables for DCDB shall be terminated on terminal connectors provided at the bottom. Connection between incomer terminals and MCBs shall be with 50 sq. mm copper cable. Outgoing shall be connected with 35 sq. mm copper cable. For all 32 A rated MCBs, 16 sq. mm. stranded cable shall be used. For all 16A rated MCBs, 10 sq. mm. stranded cable shall be used. DCDB should have 2 sets of Bus Bars in Two separate compartments to facilitate termination of Incomers from two sets of Battery and Chargers. One Change over switch should be provided to facilitate DC supply to outgoing load circuit in the event of failure of anyone of the battery/ Charger. The change over switch should be 2 way 2 position for changing over of both incomer individually.

- I. Incoming circuit:** Two double pole MCBs of 63 Amps capacity shall act as Incoming breaker of load bus. Change over switch of 63 Amps DP is to be provided. Incoming cable for incomer **LT XLPE, 2 C, 120 sq. mm Copper cable** shall be provided.

II. Outgoing Circuits:

Sr. No.	Feeder Rating	Cable size	Source-1	Source-2
1.	Double pole DC MCB 32A, 250 V	2 core 16 sq. mm LT PVC cable	04 nos.	04 nos.
2.	DP 16 A MCBs, 250 V	2 core 10 sq. mm LT PVC cable	08 nos.	08 nos.

Total 24 Nos. outgoing circuits shall be provided as per the details given below.

MCB:-

MCBs shall comply following specifications as per IS 8828/1996.

- a) Rated voltage & freq. shall be 240V & 50 Hz respectively for DP MCBs.
 - b) Rated current shall be 32A/16 A as mentioned above.
 - c) Rated short circuit capacity shall be min. 6 KA at 0.7 p.f. lag
 - d) Service short circuit capacity shall be 6KA as per table 15 of IS: 8828 /1996.
 - e) MCBs shall have fixed unadjustable time / current characteristics.
 - f) Under voltage release and shunt-trip release coils are not required. Only overload release and short circuit
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release shall be provided.

- g) Tripping time shall be as per (clause No. 8.6.1) table 6 of IS: 8828 /1996. Tripping mechanism thermal magnetic type.
- h) MCBs having precision moulded case and cover of flame retardant high strength thermo plastic material with high melting point, low water absorption, high dielectric strength and temperature with stand capacity shall be capable of carrying out given no. of operation cycles as per clause No. 9.11 of IS: 8828 /1996.
- i) Limits of temperature rise shall be as per (clause No. 9.8) table 5 of IS: 8828/1996.
- j) Standard range of instantaneous tripping shall be type 'B' as per (clause No.5.3.5) table 2 of IS: 8828 /1996.

All MCB outgoing terminals shall be terminated on terminal connectors of 10 mm. stud type provided at the bottom.

The enclosure shall be provided with proper earthing arrangement. Earthing arrangement shall consist of 2 G.I. Bolts of 12 mm x 50mm (min.) with 2 spring/ plain washers and 2 check nuts. PVC cable glands of adequate size shall be provided for all incoming and out going cables. The moving contacts of all poles of multi-pole circuit breaker shall be so mechanically coupled that all poles, except the switched neutral, if any, make and break substantially together. Whether operated manually or automatically even if an overload occurs on one protected pole only. Both side terminal should be suitable for direct cabling as well as bus bar connection and should take wire up to cross section area of 25 sq.mm.

Detailed specification is tabulated below:-

Standard	IS:8828:96 & IEC:60898:2002
Type/Series	B&C
Rated Current(DC)	20A for SPN, 36A for DP
Rated Voltage(DC) Volt	110
Rated short circuit breaking capacity kA	10
Ambient temperature(deg C)	-5 to +55
Protection class	IP-20

III. Relay and protection:

- i. One Mains failure Alarm relay.
- ii. One Earth Fault alarm relay
- iii. One 48 Volt DC Bell to be operated by the Mains failure alarm relay.
- iv. One 48-volt DC Buzzer to be operated by the earth fault alarm relay.

IV.AC/DC Change Over Contacts

Emergency lighting circuit shall be provided by the Bidder such that the lights normally burn on AC 240 Volts, 50 Hz but in case of failure of AC supply, these come up on DC supply with the help of automatic change over contactors and again change over to AC supply with the restoration of AC supply. There shall be two number double pole ON/OFF switches with HRC fuses one each for AC and DC supply.

V. Indicating Instruments:

D.C Ammeter: Ammeter shall comply the following requirements

Class of accuracy	1.0
Range	15 Amps
Mounting	Flush type
Size	96 x 96mm
Type	Analog

D.C Volt Meter: Voltmeter shall comply the following requirements

Class of accuracy	1.0
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Mounting	Flush type
Size	96x 96 mm
Range	150 volts
Type	DC moving coil

VI. Indicating Lamps:

Indicating lamps shall be panel mounting type 23 mm with rear terminal connections having low wattage LEDs cluster type. Lamps shall have translucent lamp covers to diffuse lights, coloured red for 'DC ON' condition. The lamp cover shall be preferably of screw-on type, unbreakable and moulded from heat resisting fast coloured material. Conventional bulbs are not acceptable. Indication lamp should be suitable to operate on 48 V DC. Necessary wiring shall be provided accordingly.

VII. MARKING

Each compartment shall be provided with legible and indelibly marked/ engraved name plate. Name plates shall be white with black engraved letters. On top of each module, name plates with bold letters shall be provided for feeder designation. Each device shall also suitably marked for identification inside the panels. Name-plates with full and clear inscriptions shall be provided inside the panels for all isolating switches, links, fuse blocks, test blocks and cable terminals. Every switch shall be provided with a nameplate giving its function clearly. Switches shall also have clear inscriptions for each position indication e.g. 'ON' 'OFF' etc.

VIII. Earthing Arrangements:

Two nos. Earthing studs of galvanized M.S. 25 X 6 mm shall be provided for external earth connections at the bottom. These should be complete with plain washer, spring washer, nuts etc. Earthing Bolts must be welded to prevent removal of the same from the cabinet. Flexible stranded copper connector (braided conductor) should be connected of copper equivalent 10 sq. mm. size between door and box enclosure. This flexible braided cable should be terminated using gland and proper size nut/bolts at both ends.

IX. Mounting Clamps:

The DCDB box are to be manufacture with suitable mounting arrangement on wall/steel support by means of 4 nos. 25X6 mm size clamps having hole dia. 14mm, fixed over the body

X. Gland Plate:

The removable gland plate should be provided in the lower portion of the box to accommodate all brass glands (according to requirement) for incoming and outgoing cables.

XI. Control wiring:

Each DCDB shall be furnished completely factory wired up to terminal blocks ready for external connections. All wires shall consist of 1100V grade PVC insulated flexible stranded copper wires with a cross-section of 2.5 sq. Mm suitable for switchboard wiring and complying with the requirement of relevant IS. Each wire shall bear an identifying ferrule or tag at each end or connecting point. Control cables for external connections shall consist of stranded copper wire with 1.5, 2.5, 4.0 sq. Mm or higher cross-sectional areas and shall enter the bottom. All interconnecting/outgoing control wiring shall terminate on stud type terminals on terminal blocks. The terminals shall be marked with identification numbers to facilitate connections. The terminal blocks shall be made of moulded, non-inflammable, plastic material and arranged to provided maximum accessibility for inspection and maintenance. All terminal block shall have transparent plastic cover. The terminals shall be made of hard brass and diameter of not less than 6 mm. The studs shall be securely locked within the mounting base to prevent turning. The terminal blocks shall be provided with twenty(20) percent spare terminals. The terminals shall be suitable for connections through tinned copper crimped lugs. Wiring shall be complete in all respect to ensure proper functioning of the control, protection and monitoring scheme. Each wire shall be identified at both ends with permanent markers bearing wire numbers as per wiring diagram.

TYPE TEST CERTIFICATES: MCBs & other components used in DCDB shall be fully type tested as per relevant IS and this specification.

6.9 CABLE TRAY

GI Cable tray

Cable tray shall be prefabricated Trays should be made of MS Angle of size 50 mm. x 50 mm. x 6 mm. for both side runner with Spans Limited to 2.5 meter(approx.). Cross Support should be of MS Flats of size 600 mm. x 32 mm. x 6 mm. (approx.) welded to Runner Angle at 300 mm. (approx.) apart. After fabrication the same shall be Hot dip galvanised to achieve thickness of galvanisation shall be as per IS.

Perforated cable trays for control wiring shall also be Hot dip galvanised to achieve thickness of galvanisation shall be as per IS.

6.10 EARTHING SYSTEM

A. General

Only Plate Earthing shall be adopted. The earthing and lightning protective systems shall comply with all currently applicable standards, regulations and safety codes of the locality where the installation is to be carried out. Nothing in this specification shall be construed to relieve the Bidder of this responsibility. Wherever the word GI is used it means that hot Dip GI.

Earthing Strip shall be of **hot dip GI** of size **50mmx6mm**. The strip shall be connected to earthing terminals with Stainless Steel nut – bolts. **The strip shall be clamped with Aluminum saddles and stainless steel nut-bolts. The Cost of Strip and required accessories, labour shall be included in the overall cost (offer).**

The installation work shall conform to the latest applicable Electricity Rules, standards (IS: 3043) and codes of practices.

- After award of the Contract, the Contractor shall, carry out soil resistivity measurements at the site. A detailed earthing design shall be submitted for approval based upon the results of these tests.
- The total resistance of the earth grid shall be less than 1 ohm.
- The earthing & lightning conductors and electrodes shall be supplied. Conductors shall be free from rust, scale and other electrical and mechanical defects and all materials used shall conform to relevant standards or approved by the Employer. The sizes, materials and quantity shall be as listed.
- Copper earthing stranded conductors shall be annealed soft drawn type. Copper earthing rods and flats shall be hard drawn type. Lead coating shall be provided on copper conductors to prevent its corrosion in aggressive environments.
- Steel earthing conductors above ground shall be hot-dip galvanized, unless otherwise stated, to prevent atmospheric corrosion. If painted steel conductors are required they shall be painted with two coats of approved anti-corrosive paint.
- Flexible braids of sizes & materials shall be supplied for earthing of operating handles of isolators and earthing of equipment on moving platforms.
- The links in suitable enclosures shall be supplied for connection between each lightning conductor down comer and earth electrode.
- Cad welding type jointing equipment shall be supplied whenever specifically indicated.

B. Scope of Installation Work

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The successful Bidder shall install bare/insulated, copper/aluminium conductors, braids, etc., required for system and individual equipment earthing. All work such as cutting, bending, supporting, painting/coating drilling, brazing/soldering/welding, clamping, bolting and connecting onto structures, equipment frames, terminals, rails or other devices shall be in the scope of work. All incidental hardware and consumable such as fixing cleats/clamps, anchor fasteners, lugs, bolts, nuts, washers, bitumastic compound, anti-corrosive paint as required for the complete work shall be deemed to be included as part of the installation work.

The scope of installation of earth conductors in outdoor areas, buried in ground shall include excavation in earth upto 600 mm deep and 450 mm wide, laying of conductor at 600 mm depth (unless stated otherwise), brazing/welding/ cadwelding as reburied of main grid conductor joints as well as risers of 500 mm length above ground at required locations and backfilling. Backfilling material to be placed over buried conductor shall be free from stones and other harmful mixtures. If the excavated soil is found unsuitable for backfilling, the Bidder shall arrange for suitable soil from outside.

The scope of installation of earth connection leads to equipment and risers on steel structures/walls shall include laying the conductors, welding/cleating at specified intervals, welding/brazing to the main earth grids' risers, bolting at equipment terminals and coating welded/brazed joints by bitumastic paint. Galvanized conductors shall be touched up with zinc rich paint where holds are drilled at site for bolting to equipment/structure.

The scope of installation of electrodes shall include installation of these electrodes such as (a) directly in earth, (b) in constructed earth pits, and connecting to main buried earth grid, as per enclosed drawings/relevant standards. The scope of work shall include excavation, construction of the earth pits including all materials required for construction of the earth pits and connecting to main earth grid conductors.

The scope of installation of lightning conductors on the roofs of buildings shall include laying, anchoring, fastening and cleating of horizontal conductors, grouting of vertical rods where necessary, laying, and fastening/cleating/welding of the down comers on the wall/columns of the building and connection to the test links above ground level.

Normally an earth electrode shall not be situated less than 2m from any building. Care shall be taken that the excavations for earth electrodes may not affect the column footing or foundation of the building. In such cases, electrodes may be further away from the building.

The location of the earth electrodes shall be such that the soil has reasonable chances of remaining moist, as far as possible. Entrances, pavements and roadways are definitely avoided for locating the earth electrodes.

The scope of installation of the test links shall include mounting of the same at specified height on wall/column by suitable brackets and connections of the test link to the earth electrode.

C. Work Details

Earthing conductors along their run on walls and columns shall be supported by cleating/welding at intervals of 750 mm and 1000 mm respectively.

Wherever earthing conductors cross underground service ducts and pipes, it shall be laid 300 mm below; the earthing conductor shall be bounded to such service ducts/pipes.

Wherever main earthing conductor crosses cable trenches, they shall be buried below the trench floor.

Suitable earth risers approved by the Engineer-in-Charge shall be provided above finished floor/ground level, if the equipment is not available at time of laying of the main earth conductors. The minimum length of such riser inside the building shall be 200 mm and outdoors shall be 500 mm above ground level. The risers to be provided shall be marked in project drawings.

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Earth leads and risers between equipment earthing terminals and the earthing grid shall follow as direct and short a path as possible.

Neutral connection shall never be used for the equipment earthing.

Each neutral point of a transformer shall be earthed to two separate earth electrodes for connection with earthing system.

Shield wire in sub-stations shall be connected to the earthing grid through test links at every alternate switchyard portal tower.

A separate earth electrode bed shall be provided adjacent to structures supporting lightning arrestors and coupling capacitors. Earth connections shall be as short and as straight as practicable. For arrestors mounted near transformers, earth conductors shall be located clear of the tank and coolers.

Wherever earthing conductor passes through walls, galvanized iron sleeves shall be provided for the passage of earthing conductor. The pipe ends shall be sealed by the Bidder by suitable water proof compound. Water stops shall be provided wherever earthing conductor enters the building from outside below grade level. Water stops and above mentioned sleeves shall be provided by the Bidder.

D. Earthing Connections

All connections in the main earth conductors buried in earth/concrete shall be welded/brazed type. Connection between main earthing conductor and earth leads shall also be of welded/brazed type. Cadwelding type connections shall be done if specifically indicated.

Connection between earth leads and equipment shall be of bolted type, unless specified otherwise or shown in the drawings. Equipment Bidders shall provide earthing terminals on their equipment.

Welding and brazing operations and fluxes/alloys shall be of approved standards.

All connections shall be of low resistance. Contact resistances also shall be minimum.

All bimetallic connections shall be treated with suitable compound to prevent moisture ingression. Metallic conduits and pipes shall be connected to the earthing system unless specified otherwise.

E. Earth Electrode

Electrodes shall be housed in test pits with concrete covers for periodic testing of earth resistivity. Installation of rod/pipe/plate electrodes in test pits shall be convenient for inspection, testing and watering wherever required.

F. Plate Earth Electrode

For plate electrode minimum dimension of the electrode shall be as under:-

- i) GI plate electrode 60 cm x 60 cm x 10 mm thick

Heavy duty cast iron frame with cover shall be suitably embedded in the masonry.

Soil, salt and charcoal placed around the electrode shall be finely graded, free from stones and other harmful mixtures. Backfill shall be placed in the layers of 250 mm thick uniformly spread and compacted. If excavated soil is found unsuitable for backfilling, the Bidder shall arrange for a suitable soil from outside.

G. Method of Connecting Earthing Lead to Earth Electrode

In the case of plate earth electrodes, the earthing lead shall be securely bolted to the plate with two bolts, nuts, check-nuts and washers.

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All materials used for connecting the earth lead with electrodes shall be GI in case of GI pipe and GI plate earth electrodes and of copper in case of copper pipe / plate electrodes.

The earthing lead shall be securely connected at the other end to the main board.

H. Size of Earthing Conductor

The earthing system shall be designed in such a way that over all earth resistance is less than one ohm. The soil resistivity shall be measured at site by the Bidder. If required, number of earth electrodes to be increased by the Bidder to achieve the required earth resistance.

6.11 DISMANTLING AND REINSTALLATION

HT Panel:-

Existing HT Panel 33 kV, VCB Panel (04 Sets) and 3.3kV BOCB Panel (04 sets) at Master control sub-station of HDC, SMP, Kolkata shall be dismantled.

Dismantled VCB panel's shall be reinstalled at Intake sub-station of HDC, SMP, Kolkata as directed by the engineer. 33KV MOCB Panels to be handed over to HDC site/store as directed by the Engineer.

Shutdown will be provided by HDC. However bidder shall make all necessary arrangements and equipment to minimise shutdown time and re installation of 33kV VCB Panel dismantled for Master control sub-station.

Bus duct:-

Existing LV Bus duct at Master control sub-station of HDC, SMP, Kolkata shall be dismantled and handed over to CHP store of HDC, SMP, Kolkata or as directed by the Engineer.

33/3.3kV, 6MVA Oil type transformers:-

Existing Damaged 6MVA outdoor oil type transformers(02Nos.) at Master control sub-station of HDC, SMP,Kolkata shall be shifted to CHP store of HDC, SMP, Kolkata or as directed by the Engineer.

Contractor shall take extra care while handling the same.

6.12 LIST OF APPROVED MAKES

Sl.No.	ITEM	Name of Manufacturers
1	Transformer	VOLTAMP / BHARAT BIJLEE/ CGL /SIEMENS /SCHNEIDER/ABB
2	VCB Panel	SIEMENS / ABB / SCHNEIDER
3	HT Cable	FINOLEX / RPG / APAR INDUSTRIES / TORRENT / HAVELLS / UNISTAR /POLYCAB

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Sl.No.	ITEM	Name of Manufacturers
4	LT Cable (XLPE)	UNISTAR / FINOLEX/ HAVELLS / RPG / APAR INDUSTRIES/POLYCAB /KEI/ TORRENT
5	Outdoor CT	SCHNEIDER / JYOTI / KAPPA / PRAGATHI
6	Outdoor PT	SCHNEIDER / JYOTI / KAPPA / PRAGATHI
7	Volt meter and Ammeter	AE / MECO / YOKINS / NIPPEN
8	LA	OBLUM / LAMCO / ELEKTROLITES
9	Load break switch Panel	A BOND STAND / ELTECH CONTROLS/ MEGAWIN
10	LT Panels	SIEMENS / L&T / SCHNEIDER / ABB
11	Cable St.through jointing / end Termination Kit	3M / RAYCHEM
12	Battery	HBL/EXIDE/AMARON/ AMCO
13	Selector switches, Push buttons, Emergency Switches	KAYCEE / L & T / GE / BCH / LEGRAND
14	HRC Fuses	L & T / GE / SIEMENS / ABB / INDO KOPP
15	Indicating light	AE / KAYCEE / VAISHNAV / L & T /SIEMENS
16	MCB	L & T / LEGRAND / SIEMENS / ABB / SCHNEIDER
17	Sub Distribution Board	L & T / LEGRAND / SIEMENS / SCHNEIDER / HENSEL
18	EL MCB	L & T / SCHNEIDER / LEGRAND / SIEMENS / ABB
19	PVC insulated copper conductor single/multi core stranded wires of 650/1100 volt grade	HAVELLS / FINOLEX / RPG /UNIFLEX /NICCO /RR Kables
20	Steel Conduit/PVC Conduit	BEC / AKG / NIC
21	Switches, TV & Telephone Socket outlets, Boxes	MK / CLIPSAL / LEGRAND / NORTH WEST /ANCHOR
22	Light Fixtures(LED)	PHILIPS / BAJAJ / WIPRO / CROMPTON/HAVELLS
23	Ceiling fans/Wall bracket fans / Exhaust	HAVELLS / CROMPTON GREAVES / USHA / ORIENTAL

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Sl.No.	ITEM	Name of Manufacturers
	Fans	
24	Cable lug & Cable Gland	DOWELLS / JHONSON / RAYCHEM
25	Terminal Blocks	WAGO & CONTROLS / PHOENIX CONTACTS / OBO BETTERMANN
26	Lightning Protection	DUVAL MESSIEN / SOUTH ASIAN ENTERPRISE LTD. / OBO BETTERMANN
27	Multi-function Meter	ABB / SIEMENS / L&T / HPL SOCOME/CONZERVE (ENERCON)
28	DWC HDPE Pipe	DURA LINE / CARLON / EMTELLE
29	Contactors	L&T / SCHNEIDER / SIEMENS/ABB / BCH
30	MCCB	L&T / SIEMENS / SCHNEIDER / ABB
31	Push Buttons	SIEMENS / ABB / TELEMECANIQUE / L&T / SCHNEIDER
32	Relays	L&T / ABB / SIEMENS / SCHNEIDER/AREVA
33	Timers	L&T / SIEMENS / TELEMECANIQUE/ABB
34	Indicating Light	L&T / SIEMENS / TELEMECANIQUE / ABB / GE
35	Indicating Instruments	AE / MECO / CONZERVE / L&T
36	Panel CTs	L&T / AREVA / JYOTI / KAPPA / PRAGATHI
37	Panel PTs	AREVA / KAPPA / PRAGATHI
38	ACB	SCHNEIDER / SIEMENS / ABB / L&T
39	Selector Switch	KAYCEE / L&T / SIEMENS / BCH / GE / SALZAR
40	Capacitor Banks	EPCOS / L&T / UNIVERSAL/ABB
41	Trivector Meter (Digital)	L&T / SCHNEIDER / SIEMENS / HPL SOCOME/
42	Capacitor Panels	ABB / L&T / EPCOS / SCHNEIDER
43	Power Factor Correction Relay	EPCOS / L & T / ABB
44	Elastomeric Mat	PREMIER POLYFILM LTD / POLYELECTROSAFE / CHALLENGER

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Sl.No.	ITEM	Name of Manufacturers
45	Structure	JINDAL/ SAIL / TISCO
46	MS & GI Conduits Accessories	STEEL MARK / NIC
47	Items not covered above	As per samples approved by the engineer.

6.13 INSPECTION AND TESTING.

Equipment will be duly inspected in the manufacturer's works / premises **by Engineer/TPI Agency** before despatch to the site. **Cost of TPI Agency will be borne by the Port.**

Inspection of the items to be supplied by the contractor will be carried out **by the Engineer/ TPI Agency prior to despatch**, as per the procedure mentioned in the for the relevant Item. Such inspection will be carried out within 10 days from the date of receipt of Inspection Call from the contractor.

The Engineer of the Contract reserves the right to waive inspection at Manufacturer's premises (witnessing tests) and to inspect (physically) the materials at site, after delivery, against Manufacturer's Internal Test Certificate.

The job of installation and commissioning will be inspected by the **Engineer/TPI Agency in different stages** and also after completion of the job. For this, the contractor shall have to submit a **Field Quality Assurance Plan (FQAP)**, which will be subsequently approved by the Engineer and the inspection will be carried out in accordance with the approved FQAP.

Inspection and Testing by the **Engineer/TPI Agency** shall not relieve the successful bidder of their obligation for supplying the items and execution of the entire work in accordance with the **Contract Condition** and relevant **Acts, Rules and Codes of Practice**.

I. **110 V DC Battery Bank:**

The Battery Bank will be inspected at site, after delivery, by **the Engineer/TPI Agency**, based on Manufacturer's Internal Test Certificate.

II. **Battery Charger and DCDB:**

The Battery Chargers will be inspected at site, after delivery, by **the Engineer/TPI Agency**, based on Manufacturer's Internal Test Certificate.

III. **HT XLPE Cables :**

Following tests will be witnessed by **the Engineer/TPI Agency** at Manufacturer's works before despatch:

a) **Routine Tests** as per IS:7098-II

b) **Acceptance Tests** as per IS:7098-II

Manufacturer's Certificate for **Type Test** (as per IS: 7098), for similar type cable, should be made available to **the Engineer/TPI Agency** during the above inspection.

IV. **6000kVA, 33/3.3KV, 3 Phase, 50 Hz Transformer:**

a) **Routine Tests** and **Temperature Rise Test** (as per IS:2026) will be witnessed by **the Engineer/TPI Agency** at Manufacturer's works before despatch

b) Manufacturer's Certificate for **Type Test** (as per IS: 2026), for any Transformer of at least 33 KV, 3000 KVA rating, should be made available to **the Engineer/TPI Agency** during the above inspection. In addition to the above, Radiator Banks, Pressure and Vacuum test of the Transformer

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tank to be tested as per CBIP Manual during manufacturing and test reports shall be submitted during final inspection.

V. Vacuum Circuit Breaker Panel

Vacuum Circuit Breaker units:

- **Routine Tests** (as per IS: 13118) will be witnessed by **the Engineer/TPI Agency** at Manufacturer's works before despatch.
- Manufacturer's Certificate for **Type Test** (as per IS: 13118), for similar type equipments, should be made available to **the Engineer/TPI Agency** during the above inspection. Following **Type Test reports to be submitted.**
 - Short time and peak withstand current test
 - Temperature rise tests
 - Dielectric tests
 - CB make break duty test
 - Ingress protection test
 - Internal Arc Test for IAC-AFLR 25kA for 1 sec for all three compartments
 - Seismic test for Zone IV
 - Impulse test
 - Making test for in-built earth switch

Current Transformers:

Following tests will be witnessed by **the Engineer/TPI Agency** at Manufacturer's works before despatch:-

- a) **Routine Tests** as per IS: 2705.
- b) **Verification of Terminal Markings and Polarity** as per IS:2705

Manufacturer's Certificate for **Type Test** (as per IS: 2705), for similar type equipment, should be made available to **the Engineer/TPI Agency** during the above inspection.

Potential Transformer:

Following tests will be witnessed by **the Engineer/TPI Agency** at Manufacturer's works before despatch:

- a) **Routine Tests** as per IS:3156
- b) **Verification of Terminal Markings and Polarity** as per IS:3156

Manufacturer's Certificate for **Type Test** (as per IS: 3156), for similar type equipment, should be made available to **the Engineer/TPI Agency** during the above inspection.

Complete VCB Panel:

Inspection will be carried out by **the Engineer/TPI Agency** before despatch. Manufacturers' Test Certificates for the components like **Relays, Ammeter, Voltmeter, Static kWh Meter & Maximum Demand Meter**, should be made available to **the Engineer/TPI Agency** during the above inspection.

6.14 LIST OF MANDATORY SPARES TO BE SUPPLIED

Providing following spares at sub-station, for the instant work, is under the scope of the Contractor.

Sl. No.	Item	Qty.
1.	Transformer Gasket	02sets
2.	Transformer radiator, Butterfly valve	02Nos.
3.	Transformer radiator, Drain valve	02Nos.

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Sl. No.	Item	Qty.
4.	Buchholz relay	02Nos.
5.	Transformer HV bushing, 33KV	03Nos.
6.	Transformer LV bushing,3.3KV	06Nos.
7.	33KV Single phase, Panel Mounted PT	03Nos.
8.	33KV Single phase, Panel Mounted CT	06Nos.
9.	VCB Tulip contacts	06sets
10.	Numerical relay	1set each type.
11.	VCB, 1250A Interrupter	3Nos.
12.	VCB Spring charge motor	1No.
13.	Multifunction meter	2Nos.

After completion of the work above spares may be handed over to HDC on free of cost basis.

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SECTION VII
GENERAL CONDITIONS OF CONTRACT (GCC)

**Sanctioned by the Trustees under Resolution No. 92 of the 6th Meeting
held on 27th May, 1993**

**Including Addendum Sanctioned by the Trustees under Resolution No. 80 of the Meeting
held on 25th August, 2009**

KOLKATA PORT TRUST
KOLKATA DOCK SYSTEM & HALDIA DOCK COMPLEX
AUGUST , 2009

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

GENERAL CONDITIONS OF CONTRACT

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AMENDMENT
TO
GENERAL CONDITIONS OF CONTRACT

❖ *CI-3.4 THE TENDER /OFFER & ITSPRE-REQUISITES*

Table under sub-clause (a)

PREVIOUS			AS AMENDED		
Estimated Value of Work	Amount of Earnest Money		Estimated Value of Work	Amount of Earnest Money	
	For Works Contract	For Contract of Supplying Materials or Equipment only		For Works Contract	For Contract of Supplying Materials or Equipment only
Up to Rs. 1,00,000=00	5% of the estimated value of work	1% of the estimated value of work	Up to Rs. 10 Crore	2% of the estimated value of work	1% of the estimated value of work
Over Rs. 1,00,000.00	2% of the estimated value of work subject to a maximum of Rs.20,000/- and minimum of Rs.5,000/-.	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs.1,000/-.	Over Rs. 10 Crore	2% on first Rs. 10Crore + 1% on the balance	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.

[AMENDMENT SANCTIONED BY THE BOARD OF TRUSTEES VIDE RESOLUTION NO 210 OF THE TRUSTEES' MEETING HELD ON 26.02.2013]

Table under sub-clause (d)

PREVIOUS			AS AMENDED		
Class of Registration	Amount Of Fixed Security	Financial Limit Of Each Tender	Class of Registration	Amount Of Fixed Security	Financial Limit Of Each Tender
A	Rs 10,000/-	Any tender priced upto Rs 2,00,000/-	A	Rs 50,000/-	Any tender priced up to Rs 10,00,000/-
B	Rs 5,000/-	Any tender priced upto Rs 1,00,000/-	B	Rs 25,000/-	Any tender priced upto Rs 5,00,000/-
C	Rs 2,500/-	Any tender priced upto Rs 50,000/-	C	Rs 15,000/-	Any tender priced upto Rs 3,00,000/-

[AMENDMENT SANCTIONED BY THE BOARD OF TRUSTEES VIDE RESOLUTION NO 82 OF THE TRUSTEES' MEETING HELD ON 12.10.2012]

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1. **DEFINITIONS:**

- 1.0 In the contract, as here in after defined, the following words and expressions shall have the meaning herein assigned to them, except where the context otherwise required.
- 1.1 “Employer” or “Board” or “Trustees” means of the Board of Trustees for the Port of Calcutta, a body corporate under Section 3 of the Major Port Trusts Act, 1963, including their successors, representatives and assigns. *Employer*
- 1.2 “Chairman” means the Chairman of the Board and includes the person appointed to a ctinhis place under Sections 14 and 14 A of the Major Port Trusts Act, 1963. *Chairman*
- 1.3 “Contractor” means the person or persons, Firm or Company whose tender/offer has been accepted by the Trustees and includes the Contractor’s representatives, heirs, successor and assigns, if any, permitted by the Board/Chairman. *Contractor*
- 1.4 “Engineer” means the Board’s official who has invited the tender on its behalf and includes the Manager (Infrastructure & Civic Facilities) or other official as may be appointed from time to time by the Employer, with written notification to the Contractor, to act as Engineer for the purpose of the Contract, in place of the “Engineer” so designated. *Engineer*
- 1.5 “Engineer’s Representative” means any subordinate or Assistant to the Engineer or any other official appointed from time to time by the Engineer to perform the duties set forth in Clauses 2.4 to 2.6 here of. *Engineer’s Representative*
- 1.6 “Work” means the work to be executed in accordance with the Contract and includes authorised “Extra Works” and ‘Excess Works” and “Temporary Works”. *Works*
- 1.7 “Temporary Works” means all temporary works of every kind required in or about the execution, completion or maintenance of the works and includes (without thereby limiting the foregoing definitions) all temporary erections, scaffolding, ladders, timbering, soaking vats, site offices, cement and other godowns, platforms and bins for stacking building materials, gantries, temporary tracks and roads, temporary culverts and mixing platforms. *Temporary works*
- 1.8 “Extra Works” means those works required by the Engineer for completion of the Contract which were not specifically and separately included in the schedule of items of the works i.e. (Bill of Quantities) of the tender. “Excess Works” means the required quantities of work in excess of the provision made against any item of the bill of Quantities. *Extra works and Excess works*
- 1.9 “Specifications” means the relevant and appropriate Bureau of Indian Standard’s specifications / International Standard’s Specifications (latest revisions) for materials and workmanship unless stated otherwise in the Tender. *Specification*

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|------|---|---|
| 1.10 | “Drawings” means the drawings referred to in the Tender and specification and any modification of such drawings approved in writing by the Engineer and such other drawings as may from time to time be furnished or approved in writing by the Engineer. | <i>Drawings</i> |
| 1.11 | “Contract” means and includes the General and Special Conditions of Contract, Specifications, Drawings, priced Bill of Quantities, the Tender / Offer, the letter of acceptance of the Tender/Offer, the Contract Agreement, if separately entered into and the Schedule of Rates and Price, if any, adopted by the Trustees at their discretion. | <i>Contract</i> |
| 1.12 | “Constructional Plant” means all appliances or things of whatsoever nature required or about the execution, completion or maintenance of the works or temporary works and includes (without thereby limiting the foregoing definition) all machinery and tools but does not include materials or other things intended to form or forming part of the permanent works. | <i>Constructional
Plant</i> |
| 1.13 | “Site” means the land, waterways and other places, on, under, in or through which the works are to be executed by the Trustees for the purpose of the Contract. | <i>Site</i> |
| 1.14 | “Contract Price” means the sum named in the letter of acceptance of the Tender/Offer of the Contractor, subject to such additions thereto and deductions there from as may be made by the Engineer under the provisions here in after contained. | <i>Contract Price</i> |
| 1.15 | “Month” means English Calendar Month. | <i>Month</i> |
| 1.16 | “Excepted Risks” are riot in so far as it is uninsurable, war, invasion, act of foreign enemies, hostilities) whether war be declared or not), Civil War, rebellion, revolution, insurrection or military or usurped power or use or occupation by the Trustees of any portion of the works in respect of which a certificate of completion has been issued (all of which are herein collectively referred to as the excepted risks). | <i>Excepted Risks</i> |
| 1.17 | Word importing the singular only, also includes the plural and vice-versa where the context so requires. | <i>Singular/
Plural</i> |
| 1.18 | The heading and marginal notes in these General Conditions of Contract shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the contract. | <i>Headings/ Marginal
Notes.</i> |
| 1.19 | Unless otherwise stipulated the work “Cost” shall be deemed to include overhead costs of the Contractor, whether on or off the site. | <i>Cost</i> |
| 2.0 | DUTIES & POWERS OF ENGINEER & ENGINEER’S REPRESENTATIVE. | |
| 2.1 | The Contractor shall execute, compete and maintain the works in terms of the contract to the entire satisfaction of the Engineer and Shall comply with the Engineer’s direction on any matter whatsoever. | <i>Engineer’s Authority</i> |

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- 2.2 The Contractor shall take instructions from the Engineer and subject to limitation of Clause 2.5 hereof, from the Engineer's Representative.

***Authority of
Engineer's
Representative
Engineer's Power***

- 2.3 The Engineer shall have full power and authority:

- (a) to supply to the contractor from time to time during the progress of the works such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the contractor shall carry out and be bound by the same.
- (b) to alter or modify the specification of any material and workmanship and to inspect the work at anytime.
- (c) to order for any variation, alteration and modification of the work and for extra works.
- (d) to issue certificates as per contract.
- (e) to settle the claims & disputes of the Contractor and Trustees, as the first referee.
- (f) to grant extension of completion time.

- 2.4 The Engineer's Representative shall :

***Power of Engineer's
Representative***

- (i) watch and supervise the works.
- (ii) test and examine any material to be used or workmanship employed in connection with the work.
- (iii) have power to disapprove any material and workmanship not in accordance with the contract and the contractor shall comply with his direction in this regard.
- (iv) take measurements of work done by the contractor for the purpose of payment or otherwise.
- (v) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense.
- (vi) have powers to issue alteration order not implying modification of design and extension of completion time of the work and
- (vii) have such other powers and authorities vested in the Engineer, which have been delegated to him in writing by the Engineer under intimation to the Contractor.

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2.5 *Provided always that the Engineer's Representative shall have no power:*

***Limitation of
Engineer's
Representative's
Power***

- (a) to order any work involving delay or any extra payment by the Trustees,
- (b) to make variation of or in the works; and
- (c) to relieve the Contractor of any of his duties or obligations under the Contract.

2.6 Provided also as follows:

***Engineer's
Overriding Power***

- (a) Failure of Engineer's Representative to disapprove any work or materials shall not prejudice the power of the Engineer thereafter to disapprove such work or materials and to order the pulling down, removal, breaking-up thereof and re-constructing at the contractor's cost and the contractor shall have no claim to compensation for the loss if any sustained by him.
- (b) If the contractor shall be dissatisfied by reason of any decision of the Engineer's Representative, he shall be entitled to refer the matter to the Engineer who shall thereupon confirm, reverse or vary such decision.
- (c) Any written instructions or written approval given by the Engineer's Representative to the contractor, within the terms of delegation of power and authority vested in the Engineer to his Representative in writing, shall bind the contractor and the Trustees as though it had been given by the Engineer, who may from time to time make such delegation.

3.0 THE TENDER/OFFER AND ITS PRE-REQUISITES

3.1 The Contractor shall, before making out and submitting his tender/offer, be deemed to have inspected and examined the site, fully considered all factors, risks and contingencies, which will have direct and indirect impact on his expenses and profit from the work and shall be specifically deemed to have taken the following aspects into consideration:

***The tender must
encompass all
relevant aspects/
issues***

- (a) The form and nature of the site and its surroundings including their sub-surface, hydrological, tidal and climatic conditions, the means of access to the site and all other local conditions, including the likely charges and costs for temporary way-leave, if any, required for the work.
- (b) The drawings, specifications, the nature and extent of work to be executed and the quality, quantity and availability of the required materials and labour for the work and the need to execute the work to the entire satisfaction of the Engineer, and also by complying with the General and Special Conditions of Contract.

***Site & Local
condition.***

***Drawing/
Specification/
Nature & extent of
work to be done.***

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- (c) The accommodation required for the workmen and site office, mobilisation/ demobilisation and storage of all plant, equipment and Construction materials. ***Accommodation for Contractor's men/materials.***
- (d) The sources and means of procurement of water for drinking, washing and execution of work, and source and availability of electrical power, all at Contractor's cost. ***Water for drinking etc./Electrical power***
- (e) Payment of taxes and duties and compliance of all applicable statutes, ordinances and law together with the rules made thereunder, the rules, regulations and bye-laws of public bodies or any local or other authority by the Contractor, keeping the Trustees indemnified against penalties and liabilities of every kind arising from the Contractor's failure in such compliance. ***Payment of Taxes/duties and observance of all statutes***
- (f) Payment of all kinds of stamp-duty for executing the agreement or for any legal instrument including Bank Guarantees and Indemnity Bonds. ***Payment of Stamp Duty by the Contractor***
- 3.2 The Contractor's tender shall be in ink on the Tender Forms supplied by the Trustees, unless stipulated otherwise in the Notice Inviting the Tender and shall be faultless in figures and free from erasing. Corrections, if any, shall only be made by scoring out and initialling of the revised figure.
- 3.3 If required by the Engineer or the Trustees, the Contractors in their tender or subsequently, shall disclose the names of their owners/partners/share holders at the required points of time. The failure in this regard shall be treated as a breach and a contract, if entered into, shall be liable to be cancelled. ***Disclosure of Owner's name.***
- 3.4 (a) Unless otherwise stipulated in the Notice Inviting Tender / Offer, every tender must be submitted with Earnest Money of the amount calculated as per the following scale. ***Earnest Money and Security Deposit***

Estimated Value of Work	Amount of Earnest Money	
	For Works Contract	For Contract of Supplying Materials or Equipment only
Up to Rs. 1,00,000=00	5% of the estimated value of work	1% of the estimated value of Work
Over Rs. 1,00,000=00	2% of the estimated value of work subject to a maximum of Rs. 20,000/- and minimum of Rs. 5,000/-.	½% of the estimated value of work subject to a maximum of Rs. 10,000/- and minimum of Rs. 1,000/-.

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- (b) Earnest Money shall be deposited with the Trustees' treasurer in cash or by Banker's Cheque of any Calcutta Branch of a Nationalised Bank of India drawn in favour of Calcutta Port Trust or in the form of any "Account Payee" Draft of any Nationalised Bank of India drawn in favour of "Calcutta Port Trust" and payable at Calcutta/Haldia, as the case may be, and the receipt granted therefor be kept attached to the Tender/Offer in the Sealed Cover. **Method of Paying E.M.**
- (c) Earnest Money of unaccepted tender shall be refunded without any interest through A/c. Payee Cheque drawn on a Nationalised Bank of Calcutta / Haldia. **Refund of E.M.**
- (d) The enlisted (registered) Contractors of the Trustees who have deposited fixed Security with the Trustees' FA & CAO / Manager (Finance) according to his Class of Registration, shall be exempt from depositing the Earnest Money, as per the following scale: **Exemption from E.M. to Regd. Firms**

Class of Registration	Amount of Fixed Security	Financial Limit of Each Tender
A	Rs. 25,000/-	Any tender priced up to Rs.5,00,000/-
B	Rs. 10,000/-	Any tender priced up to Rs.2,00,000/-
C	Rs. 5,000/-	Any tender priced up to Rs.1,00,000/-

- (e) (i) Tender submitted without requisite Earnest Money may be liable to rejection. **Tender with- out EM liable to rejection.**
- (ii) If before expiry of the validity period of his Tender/Offer, the tenderer amends his quoted rates or tender/offer making them unacceptable to the Trustees and/or withdraws his tender/offer, the Earnest Money deposited shall be liable to forfeiture at the option of the Trustees. **Forfeiture of E.M. before Acceptance of offer.**
- (f) The Earnest Money of accepted tender/offer shall be retained by the Trustees as part of the Security Deposit, for which a separate Treasury Receipt shall be issued to the Contractor after cancellation of the previous Receipt of Earnest Money. **E.M. to be converted to part S.D.**
- (g) Balance security for works contract shall be recovered by deduction from all progressive Bill (including final Bill, if necessary) @ 10% of the gross value of work in each such bill, so that the total recovery may not exceed the quantum computed as per the under noted percentages of the total value of work actually done up to the stage of completion. **Mode of recovery of balance S.D.**

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Value of Work	% of Security Deposit for works contract.	% of Security Deposit For contract of supply- ing materials & equipment only.
For works up to Rs.10,00,000/-.	10% (Ten percent)	1% (One percent)
For works costing more than Rs.10,00,000/- and up to Rs.20,00,000/-	10% on first Rs.10,00,000/- + 7½% on the balance.	1% on first Rs.10,00,000/- + ½% on the balance.
For works costing more than Rs.20,00,000/-	10% on first Rs.10,00,000/- + 7½% on the next Rs.10,00,000/- + 5% on the balance.	1% on first Rs.10,00,000/- + ½% on the next Rs.10,00,000/- + ¼% on the balance.

Scale of S.D. recovery.

- (h) Balance Security for Contract of supplying materials and equipment computed in terms of the percentages given above, shall have to be deposited with the Trustees' Treasurer in advance and within 30 days from the date of placement of supply order, either in cash or by A/c. Payee Draft of a Nationalised Bank of India drawn in favour of Calcutta Port Trust and payable at Calcutta/Haldia, as the case may be.

S.D. for supply contracts to be deposited in advance

- (i) No interest shall be paid by the Trustees to the Tenderer/Contractor on the amount of Earnest Money/Security Deposit held by the Trustees, at any stage.

No interest payable on E.M. /S.D

- 3.5 (i) The Security Deposit shall refunded to the Contract or in terms of Clause 9.3 hereinafter and subject to deduction, if any, under the provision of Sub-clause 3.5 (ii) herein below. Id, however, the Contract provides for any maintenance period. 50% of the Security Deposit may be refunded against any of the treasury Receipt for that amount on expiry of half of the maintenance period and the balance deposit on the expiry of the said maintenance period and after the Engineer has certified the final completion of work in Form G.C.2 and the Contractor has submitted his "No Claim" Certificate in Form G.C.3.

Mode of refund of S.D.

- (ii) The Security Deposit/Earnest Money may be liable to forfeiture at the option of the Trustees, if the Contractor fails to carry out the work or to perform/observe any of the conditions of the Contract. The Trustees shall also be at liberty to deduct any of their dues from the Security Deposit, fixed Security, Earnest Money or from any sum due or to become due to the Contractor under any other contract.

Forfeiture of S.D.

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- 3.6 If stipulated in the contract as a Special Condition, the contractor shall have to submit to the Engineer a performance Bond in the form of an irrevocable guarantee from Calcutta/Haldia Branch, as the case may be, of any Nationalised Bank of India in the proforma annexed hereto and for the sum and period as mentioned in the letter of acceptance of the Tender/Offer, within 15 days from the date of such letter, failing which the Contract shall be liable to be terminated and the earnest money shall be liable to forfeiture; all at the discretion of the Engineer. The cost of obtaining this or any other Bank Guarantee and/or the revalidation thereof, wherever required, has to be borne by the Contractor and it shall be his sole responsibility to arrange for timely revalidation of such Bank Guarantee, failing which and for non-fulfilment of any contractual obligation by the Contractor, the Engineer and/or the Trustees shall be at liberty to raise claim against the Guarantee and/or enforce the same unilaterally.
- Bank Guarantee in lieu of Cash S.D. in certain Cases*
- 3.7 “Every Tenderer/ Bidder shall submit, in respect of a tender value of more than Rs. 5 Crore, along with their tender comprising Special Conditions of Contract, General Conditions of Contract, BOQ, Earnest Money, etc. a document called Integrity Pact Agreement duly signed by their authorized representative. The Proforma of the Integrity Pact Agreement shall as specified in the GCC. In case of tender value more than Rs 5 Crore, the Integrity Pact Agreement is an essential part and parcel of bid document to be submitted by each tenderer, without which the tender shall not be considered.”
- 4.0 THE CONTRACT & GENERAL OBLIGATIONS OF CONTRACTOR
- 4.1 (a) The contract documents shall be drawn-up in English language.
- English language to be used*
- (b) The contract shall be governed by all relevant Indian Acts. As applicable only within the jurisdiction of the High Court at Calcutta, India, including the following Acts:
- Applicability of laws on the contract*
- 1) The Contract Act (India), 1872.
 - 2) The Major Port Trusts Act, 1963.
 - 3) The Workmen’s Compensation Act, 1923.
 - 4) The Minimum Wages Act, 1948.
 - 5) The Contract Labour (Regulation & Abolition) Act, 1970.
 - 6) The Dock Workers’ Act, 1948.
 - 7) The Arbitration and Conciliation Act (1996) (in the case of a definite Arbitration Agreement only).
 - 8)
- 4.2 After acceptance of his Tender/Offer and when called on to do so by the engineer or his representative, the contractor shall, at his own expense, enter into and execute a Contract Agreement to be prepared by him in the form annexed hereto. Until such Contract Agreement is executed, the other documents referred to in the definition of the term ‘Contract’ here-in-before, shall collectively be the Contract.
- Contractor to Execute Contract Agreement.*
- 4.3 Several documents forming the contract are to be taken as mutually explanatory of one another. Should there be any discrepancy, ambiguity, omission or error in the various contract documents, the Engineer shall have the power to correct the same and his decision shall be final and binding on the parties to the Contract.
- Interpretation of Contract documents– Engineers’ Power*

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| 4.4 | Single copies of the Drawings referred to in the general and special Conditions of Contract and in the Bill of Quantities, shall be furnished by the Engineer to the Contractors free of cost for his use on the work, but these shall remain the property of the Trustees and hence, the Contractor shall return them to the Engineer or his Representative on completion of the work, if not torn or mutilated on being regularly used at site. | <i>All Drawings are Trustees' property</i> |
| 4.5 | The Contractor shall prove and make at his own expense any working or progress drawings required by him or necessary for the proper execution of the works and shall, when required, furnish copies of the same free of cost to the Engineer for his information and/or approval, without meaning thereby the shifting of Contractor's responsibility on the Engineer in any way whatsoever. | <i>Contractor to prepare working / progress drawings</i> |
| 4.6 | The Contractor shall not directly or indirectly transfer, assign or sublet the Contract or any part thereof without the written permission of the Engineer. Even if such permission be granted, the Contractor shall remain responsible (a) for the acts, defaults and neglect of any sub-contractor, his agents, servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor himself or his agents, servants or workmen and (b) for his full and entire responsibility of the contract and for active superintendence of the works by him despite being sublet, provided always that the provision of labourers on a "piece rate" basis shall not be deemed to be sub-letting under this clause. | <i>Contractor cannot sub-let the work</i> |
| 4.7 | Unless otherwise specified, the Contractor shall be deemed to have included in his Tender/Offer all his cost for supplying and providing all constructional plant, temporary work. Materials both for temporary and permanent works, labour including supervision thereof, transporting to and from the site and in and about the work, including loading, unloading, fencing, watching, lighting, payment of fees, taxes and duties to the appropriate authorities and other things of every kind required for the construction, erection, completion and maintenance of the work. | <i>Contractors' price is inclusive of all costs</i> |
| 4.8 | The Contractor shall be solely responsible for the adequacy, stability and safety of all site operations and methods of construction, even if any prior approval thereto has been taken from the Engineer or his Representative. The Contractor shall not be responsible for the correctness of the design or specification of the Temporary and Permanent works formulated by the Engineer; but the Contractor shall be fully responsible for the correct implementation thereof, as also for any design and specification prepared/proposed/used by the Contractor. | <i>Contractor is responsible for all construction process, except for correctness of design and specification formulated by the Engineer</i> |
| 4.9 | Whenever required by the Engineer or his representative, the Contractor shall submit to him the details of his (a) programme for execution of the work, (b) proposed procedure and methods of work, (c) proposed deployment of plant, equipment, labour, materials and temporary works. The submission to and/or any approval by the Engineer or his Representative to any such programme or particulars shall not relieve the Contractor of any of his obligations under the contract. | <i>Contractor to submit his programme of work</i> |

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If for any reason the contractor be unable to adhere to his earlier programme, he shall submit his revised programme for completion of work within the stipulated time whenever asked to do so.

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| 4.10 | Necessary and adequate supervision shall be provided by the Contractor during execution of the works and as long thereafter as the Engineer or his representative shall consider necessary during the maintenance period. The Contractor or his competent and authorised agent or representative shall be constantly at site and instructions given to him by the Engineer or his representative in writing shall be binding upon the Contractor subject to limitation in Clause 2.5 hereof. The Contractor shall inform the Engineer or his representative in writing about such representative/agent of him at site. | <i>Contractor to supervise the works</i> |
| 4.11 | The Contractor shall employ in execution of the Contract only qualified careful and experienced persons and the Engineer shall be at liberty to direct the Contractor to stop deployment of any of his staff, workmen or official at site and the Contractor shall within 48 hours comply with such instruction without any demur whenever the Engineer shall feel that the deployment of the person concerned will not be conducive to the proper and timely completion of the work. | <i>Contractor to deploy qualified Men and Engineer's power To remove Contractor's men</i> |
| 4.12 | The Contractor shall be responsible for the true and proper setting out of the works in relation to reference points/lines/levels given by the Engineer in writing. The checking of any setting-out or of any alignment or level by the Engineer or his Representative shall not in any way relieve the contractor of his responsibility for the correctness thereof and he shall fully provide protect and preserve all stakes, templates, bench marks, sight rails, pegs, level marks, profile marks and other things used in setting out the works. | <i>Contractor is responsible for line, level, setting out etc.</i> |
| 4.13 | From the commencement of the works till issue of the completion certificate in Form G.C.1, vide Clause 5.12 hereof, the contractor shall take full responsibility for the care thereof. Save for the excepted risks, any damage, loss or injury to the work or any part thereof shall be made good by the Contractor at his own cost as per instruction and to the satisfaction of the engineer, failing which the Engineer or his Representative may cause the same to be made good by any other agency and the expenses incurred and certified by the Engineer shall deem proper. This Clause will not apply to that part of the work, which might have been taken over by the Trustees on partial completion of the work and in such case the Contractor's obligation will be limited to repairs and replacement for manufacturing or construction defects during the Maintenance period (Guarantee Period) as per the directions of the Engineer as also for defects/damages if any caused to the work by the Contractor during such repairs and replacement in the maintenance period. | <i>Contractor is responsible to protect the work</i> |

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- 4.14 The Contractor shall at his own cost protect support and take all precautions in regard to the personnel or structure or services or properties belonging to the Trustees or not which may be interfered with or affected or disturbed or endangered and shall indemnify and keep indemnified the Trustees against claim for injury, loss or damage caused by the Contractor in connection with the execution and maintenance of the work to the aforesaid properties, structures and services and/or to any person including the Contractor's workmen. Cost of Insurance Cover, if any, taken by the Contractor shall not be reimbursed by the Trustees, unless otherwise stipulated in the Contract.
- Contractor is responsible for all damages to other structures / Persons caused by him in executing The work.*
- 4.15 The Contractor shall immediately inform the Engineer's Representatives if any fossil, coins, articles of value or antiquity and structures and other remains or things of geological or archaeological importance be discovered at site which shall remain the property of the Trustees and protect them from being damaged by his workmen and arrange for disposal of them at the Trustees' expense as per the instruction of the Engineer's Representative.
- Fossils, Treasure trawois, etc. are Trustees' property*
- 4.16 The Contractor shall be deemed to have indemnified and shall indemnify the Trustees against all claims, demands, actions and proceedings and all costs arising there from on account of:
- Contractor to Indemnify the Trustees against all claims for loss, damage, etc.*
- (a) Infringement of any patent right, design, trademark or name or other protected right in connection with the works or temporary work.
 - (b) Payment of all royalties, rent, toll charges, local taxes, other payments or compensation, if any, for getting all materials and equipment required for the work.
 - (c) Unauthorised obstruction or nuisance caused by the contractor in respect of Public or Private or Private road, railway tracks, footpaths, crane tracks, waterways, quays and other properties belonging to the Trustees or any other person.
 - (d) Damage/injury caused to any highway and bridge on account of the movement of Contractor's plants and materials in connection with the work.
 - (e) Pollution of waterway and damage caused to river, lock, sea-wall or other structure related to waterway, in transporting contractor's plants and materials.
 - (f) The Contractor's default in affording all reasonable facilities and accommodation as per the direction of the Engineer or his Representative to the workmen of the Trustees and other agencies employed by or with the permission and/or knowledge of the Trustees on or near the site of work.
- 4.17 Debris and materials, if obtained by demolishing any property, building or structure in terms of the Contract shall remain the property of the Trustees.
- Dismantled materials Trustees' property*

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- 4.18 The Contractor's quoted rates shall be deemed to have been inclusive of the following: *Contractor's quoted rates/price Must be all inclusive*
- (a) Keeping the site free of unnecessary obstruction and removal from site of constructional plant wreckage, rubbish, surplus earth or temporary works no longer required.
 - (b) Cleaning and removal from site all the surplus materials of every kind to leave the site clean and tidy after completion of the work, without which payment against final bill may be liable to be withheld.
 - (c) Precautionary measures to secure efficient protection of Docks, the River Hooghly and other waterways against pollution of whatever nature during execution and maintenance of the works and to prevent rubbish, refuse and other materials from being thrown into the water by the Contractor's men or those of his agency.
 - (d) Making arrangements for deployment of all labourer and workers, local or otherwise including payment for their wages, transport, accommodation, medical and all other statutory benefits and entry permits, where ever necessary.
 - (e) Making arrangements in or around the site, as per the requirements of local authority or the Engineer or his Representative for preventing (i) spread of any infectious disease like smallpox, cholera, plague or malaria by taking effective actions for destruction of rats, mice, vermin, mosquitoes, etc. and by maintaining healthy and sanitary condition, (ii) illegal storage and distribution of Drugs, Narcotics, Alcoholic liquor, Arms and Ammunitions, (iii) unlawful, riotous or disorderly conduct of the Contractor's or his Sub-Contractor's workmen, (iv) deployment of workmen of age less than 16 years.
- 4.19 Every direction or notice to be given to the Contractor shall be deemed to have been duly served on or received by the Contractor, if the same is posted or sent by hand to the address given in the tender or to the Contractor's Site Office or to the Registered Office of the Contractor. The time mentioned in these conditions for doing any act after direction or notice shall be reckoned from the time of such posting or despatch. *Notice to Contractor*
- 4.20 The Contractor and his Sub-contractor or their agents and men and any firm supplying plant, materials and equipment shall not publish or caused to be published any photographs or description of the works without the prior authority of the Engineer in writing. *Contractor not to publish photograph or particulars of work*

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| 4.21 | The Contractor shall at the Trustees' cost to be decided by the Engineer render all reasonable facilities and Co-operation as per direction of the Engineer or his representative to any other Contractor engaged by the Trustees and their workmen to the Trustees' own staff and to the men of other Public Body on or near the site of work and in default the Contractor shall be liable to the Trustees for any delay or expense incurred by reason of such default. | <i>Contractor to provide facilities to outsiders</i> |
| 4.22 | The work has to be carried out by the Contractor causing the minimum of hindrance for any maritime traffic or surface traffic. | <i>Work to cause minimum possible hindrance to traffic movement</i> |
| 4.23 | All constructional plants, temporary works and materials when brought to the site by the Contractor shall be deemed to be the property of the Trustees who will have lien on the same until the satisfactory completion of the work and shall only be removed from the site in part or in full with the written permission of the Engineer or his Representative. | <i>Trustees' lien on Contractor's Plant & Equipment.</i> |
| 5.0 COMMENCEMENT, EXECUTION AND COMPLETION OF WORK. | | |
| 5.1 | The Contractor shall commence the work within 7 days of the receipt of Engineer's letter informing acceptance of the Contractor's tender/offer by the Trustees or within such preliminary time as mentioned by the Contractor in the Form of Tender or the time accepted by the Trustees. The Contractor shall then proceed with the work with due expedition and without delay, except as may be expressly sanctioned or ordered by the Engineer or his Representatives, time being deemed the essence of the contract on the part of the contractor. | <i>Preliminary time to commence work and maintenance of steady rate of progress</i> |
| 5.2 | The Contractor shall provide and maintain a suitable office at or near the site to which the Engineer's Representative may send communications and instructions for use of the Contractor. | <i>Contractor's site office</i> |
| 5.3 | Unless specified otherwise in the contract or prior permission of the Engineer has been taken, the contractor shall not execute the work beyond the working hours observed by the Engineer's Representative and on Sundays and Holidays observed in the Trustees' system, except in so far as it becomes essential on account of tidal work or for safety of the work. If the progress of the work lags behind schedule or the work has been endangered by any act or neglect on the part of the contractor, then the Engineer or his Representative shall order and the contractor at his own expense shall work by day and by night and on Sundays and Public Holidays. Any failure of the Engineer or his Representative to pass such an order shall not relieve the contractor from any of his obligations. The Engineer's decision in this regard shall be final binding and conclusive. | <i>Contractor to observe Trustees' working hours</i> |

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- 5.4 Unless stipulated otherwise in the contract all materials required for the work shall be procured and supplied by the contractor with the approval of the Engineer or his Representative and subject to subsequent testing as may be required by the Engineer or his Representative. The Engineer shall exercise his sole discretion to accept any such materials. ***Contractor to supply all materials as per requirement of the Engineer or his representative***
- 5.5 Unless stipulated otherwise in the contract all materials, workmanship and method of measurement shall be in accordance with the relevant Codes (Latest Revision) of the Bureau of Indian Standards and the written instructions of the Engineer or his Representative. Where no specific reference is available in the contract, the material and workmanship shall be of the best of their respective kinds to the satisfaction of the Engineer. ***Materials & Works***
- 5.6 Samples shall be prepared and submitted for approval of the Engineer or his representative, whenever required to do so, all at the Contractor's cost. ***Contractor to submit samples for approval***
- Unless stipulated otherwise in the contract, the cost of any test required by the Engineer or his representative in respect of materials and workmanship deployed on the work, shall be borne by the Contractor. ***Contractor to arrange all testing at his own cost.***
- 5.8 Regarding the supply of any materials by the Trustees to the contractor in accordance with the contract, the following conditions shall apply:
- (a) The Contractor shall, at his own expense, arrange for transporting the materials from the Trustees' Stores, watching, storing and keeping them in his safe custody, furnishing of statement of consumption thereof in the manner required by the Engineer or his representative, return of surplus and empty container to the Trustees' Stores as per the direction of the Engineer or his Representative. ***The Contractor shall account for and look after the Trustees' materials***
- (b) Being the custodian of the Trustees' materials, the contractor shall remain solely responsible for any such materials issued to him and for any loss or damage thereof for any reason other than "Excepted Risks", the Contractor shall compensate the Trustees' in the manner decided by the Engineer and shall at no stage remove or cause to be removed any such material from the site without his permission in writing. ***Contractor to compensate for loss and damage to Trustees' materials***
- (c) The Trustees' materials will generally be supplied in stages and in accordance with the rate of progress of work but except for grant of suitable extension of completion time of work as decided by the Engineer. The Contractor shall not be entitled to any other compensation, monetary or otherwise, for any delay in the supply of Trustees' materials to him. The Contractor shall, however, communicate his requirement of such materials to the Engineer from time to time. ***Delay in supply of Trustees' materials will only entitle the Contractor for extension of completion time of work***

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(d) Unless stipulated otherwise in the contract, the value of the Trustees' materials issued to the contractor shall be recovered from the contractor's bills and/or any of his other dues, progressively according to the consumption thereof on the work and/or in the manner decided by the Engineer or his representative and at the rate/s stipulated in the contract. These rates shall only be considered by the contractor in the preparation of his tender/offer and these will form the basis of escalation/variation, if in future the contractor is required to procure and provide any such material on the written order of the Engineer consequent on the Trustees' failure to effect timely supply thereof.

Recovery from Contractor for Trustees' materials under normal circumstances

(e) If the Engineer decides that due to the contractor's negligence, any of the Trustees' materials issued to the contractor has been – (i) lost or damaged, (ii) consumed in excess of requirement and (iii) wasted by the contractor in excess of normal wastage, then the value thereof shall be recovered from the contractor's bills or from any of his other dues, after adding 19 ¼% extra over the higher one of the followings-

Recovery from Contractor for Trustees' materials under other circumstances

1. The issue rate of the materials at the Trustees' Stores and
2. The market price of the material on the date of issue as would be determined by the Engineer.

5.9 The Engineer or his Representative shall have the power to inspect any material and work at any time and to order at any time – (i) for removal from the site of any material which in his opinion is not in accordance with the contract or the instruction of the engineer or his representative, (ii) for the substitution of the proper and suitable materials, or (iii) the removal and proper re-execution of any work which in respect of material and workmanship is not in accordance with the contract or the instructions of the Engineer. The Contractor shall comply with such order at his own expense and within the time specified in the order. If the contractor fails to comply, the Engineer shall be at liberty to dispose any such materials and re-do any work in the manner convenient to the Trustees by engaging any outside agency at the risk and expense of the contractor and after giving him a written prior notice of 7 days.

Contractor to replace materials/work not acceptable to the Engineer or his Representative

5.10 No work shall be covered up and put out of view by the contractor without approval of the Engineer or his Representative and whenever required by him, the contractor shall uncover any part or parts of the work or make openings in or through the same as may be directed by the Engineer or his representative from time to time and shall reinstate or make good those part of works thus affected to the satisfaction of the Engineer, all at the cost of the contractor.

Contractor to seek Approval of Engineer or his Representative before covering up any portion of work

The Trustees shall reimburse such cost as determined by the Engineer, if the initial covering up was with prior written order of the Engineer or his Representative.

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- 5.11 On a written order of the Engineer or his Representative, the contractor shall delay or suspend the progress of the work till such time the written order to resume the execution is received by him. During such suspension the contractor shall protect and secure the work to the satisfaction of the Engineer or his Representative. All extra expenses in giving effect to such order shall be considered by the Trustees, unless such suspension is –

***Contractor to
suspend work on
Order from Engineer
or his Representative***

- (a) otherwise provided for in the contract, or
- (b) necessary by reason of some default on the part of the contractor, or
- (c) necessary by reason of climatic conditions on the site, or
- (d) necessary for proper execution of the works or for the safety of the works or any part thereof.

The Engineer shall settle and determine such extra payment and/or Extension of completion time to be allowed to the contractor, as shall, in the opinion of the Engineer be fair and reasonable, and the same shall be final and binding on the Contractor.

- 5.11.1 If at any time before or after commencement of the work the Trustees do not require the whole of the work tendered for the Engineer shall notify the same to the contractor in writing and the contractor shall stop further works in compliance of the same. The Contractor shall not be entitled to any claim for compensation for underived profit or for such premature stoppage of work or on account of curtailment of the originally intended work by reason of alteration made by the Engineer in the original specifications, drawings, designs and instructions.

- 5.12 When the whole of the work has been completed to the satisfaction of the Engineer and has passed any final test prescribed in the contract, the contractor shall, within 21 days of submission of his application to the Engineer, be entitled to receive from him a certificate for completion of work in Form G.C.1, annexed hereto. If any part of the total work having been completed to the satisfaction of the Engineer, be taken over and/or used by the Trustees, the Contractor shall on application be entitled to partial completion certificate in the Form G.C.1 indicating the portion of the work covered by it, so that the Contractor's liability during maintenance period of the contract, if any, shall commence from the date mentioned in such certificate so far as the completed portion of the work is concerned.

***Completion
Certificate G.C.1.***

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6.0 TERMS OF PAYMENT:

- 6.1 No sum shall be considered as earned by or due to the Contractor in respect of the work till final and satisfactory completion thereof and until a certificate of final completion in Form G.C.2 has been given by the Engineer.

All interim payments are advances till issue of Certificate in Form G.C.2

On account payments, if any, made prior to issue of the certificate in Form G.C.2, shall all be treated as mere advance, which shall stand recoverable in full or in part, if the Engineer so decides in the context of Contractor's unfulfilled contract condition, if any.

- 6.2 All payments shall be made to the Contractor only on the basis of measurements of actual work done, as recorded in the Trustees' measurement books and at accepted tendered or at agreed rates, as the case may be, except as otherwise provided in the contract and when the Engineer decides any other rate for change in the scope of work or omission, if any, on the part of the Contractor.

Payment on the Basis of measurements at agreed rates.

- 6.3 For work of sanctioned tender value more than Rs.50,000/- or having an initially stipulated completion period of 4 months or more, on account payments may be made at the discretion of the Engineer or his Representative at intervals deemed suitable and justified by him. Provided always that subject to execution of work of substantial value in the context of the contract price, the interval of such on account payments shall be decided by the Engineer or his Representative, which shall ordinarily not be less than 1 month in between single payments for on account bill and/or advance.

Limitation for on account payment

- 6.4 Measurement for works done shall be progressively taken by the Engineer's Representative and entered in the Trustees' Measurement Book, at intervals deemed suitable and proper by him and/or the Engineer. The Contractor or his duly accredited Representative or Agent shall remain present at the time of such measurement and assist the engineer's Representative in every manner required by him. After the measurements taken have been entered in the Measurement Book, the Contractor or his Agent shall sign the Measurement Book at the end of such Measurements over the Contractor's Rubber Stamp as a token of acceptance of all such measurements, recorded above and prior to such signature. If the Contractor or his Agent fails to participate even after 3 days written notice from the Engineer's Representative, the measurement shall be taken ex-parte by the Engineer's Representative and those shall be accepted by the Contractor.

Recording of measurements

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- 6.5 Based on the quantum of work and the value thereof computed in the Measurement Book, the Contractor shall type out his bill in the proforma approved by the Engineer and submit the same to the Engineer's Representative in quadruplicate, duly signed by him or his accredited Agent over his Rubber Stamp. The Engineer or his Representative may in his absolute discretion, allow advance payment against such bill to the extent of an amount not exceeding 75% of the "net payable" sum of the said bill, subject to adjustment thereof against the bill at the time of checking and auditing the bill at the Trustees' end. The measurement Book will not be handed over to the Contractor; but he will obtain the abstracts of quantities, amounts and recoveries to type out the bill.

***Contractor to
prepare and submit
his bills***

- 6.6 At the discretion of the Engineer or his Representative and only in respect of accepted offers/where estimated amount put to tender would be Rs.2,00,000/- or more, advance payment may be made to the extent of 75% of the value of any material purchased and brought to the site by the Contractor. Provided always that

***Advance payment
against Non-
perishable materials***

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- i) Advance payment against Non- perishable materials.
 - ii) the value of such materials shall be assessed by the engineer or his Representative at their own discretion,
 - iii) a formal agreement has been drawn up with the contractor, under which the Trustees secure a lien on the contractor's materials,
 - iv) the materials are safe-guarded by the contractor against losses, shortage and misuse due to the contractor postponing the execution of the work or otherwise,
 - v) in the event of storage of such materials within the Trustees' protected areas in the Docks, the contractor shall submit an Indemnity Bond in the proforma and manner acceptable to Trustees' whereby the contractor shall indemnify the Trustees against all financial loss/damage, on account of loss/damage to such materials for whatever reasons,

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- vi) in the event of storage of such materials outside the Trustees' protected areas the Contractor shall submit to the Engineer an irrevocable Bank Guarantee favouring the Trustees and for the same sum as is being advance, in the proforma and manner acceptable to the Trustees. The Guarantee shall be of a Calcutta/Haldia Branch of any Nationalised Bank or a Schedule Commercial Bank, as the case may be, acceptable to the Trustees and shall remain valid till the anticipated period of consumption of such materials in the work. The Bank Guarantee must bear an undertaking by the issuing Bank guaranteeing automatic payment of the guaranteed sum to the Trustees by the Bank on the date of expiry of the validity of the Guarantee, unless with the prior written approval of the Engineer on behalf of the Trustees, the Bank has extended the validity of the Guarantee.
- vii) The amount of advance shall be recoverable from the contractor's bills or any other dues, progressively with the consumption of the materials on the basis of quantity consumed. Consequent on full recovery of the advance the

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Indemnity Bond/Bank Guarantee, vide Sub-clause (v) & (vi) above, shall be returned to the Contractor duly discharged by the Engineer on behalf of the Trustees.

- 6.7 No certificate of the Engineer or his representative shall protect the Contractor against or prevent the Trustees from obtaining repayment from the Contractor, in case the Engineer or his representative should over certify for payment or the Trustees should over-pay the Contractor on any account. ***Recovery for wrong and over payment***
- 6.8 No claim for interest shall be admissible or payable to the Contractor at any stage and in respect of any money or balance or Bank Guarantee, which may be due to the Contractor from the Trustees, owing to dispute or otherwise or for any delay on the part of the Trustees in making interim or final payment or otherwise. ***Interest not admissible to Contractor***
- 7.0 VARIATION AND ITS VALUATION:
- 7.1 The Quantities set out in the Bill of Quantities of the tender shall be treated as estimated quantities of the work and shall never be deemed as actual or correct quantities of the works to be executed by the contractor in fulfillment of his obligation under the contract. ***Quantities in Bill of Quantities of Tender***
- 7.2 The Engineer shall have the power to order the Contractor in writing to make any variation of the quantity, quality or form of the works or any part thereof that may, in his opinion, be necessary and the Contractor upon receipt of such an order shall act as follows: ***Engineer's power to vary the works***
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- 7.2 a) Increase or decrease the quantity of any work included in the contract.
b) Omit any work included in the contract.
c) Change the Character or quality or kind of any work included in the contract.
d) Change the levels, lines, position and dimensions of any part of the work, and
e) Execute extra and additional work of any kind necessary for completion of the works
- 7.3 No such variation shall in any way vitiate or invalidate the contract or be treated as revocation of the contract, but the value (if any) of all such variations evaluated in accordance with the Engineer's sole decision shall be taken into account and the contract price shall be varied accordingly. ***Variation by engineer do not Vitate the contract***
- 7.4 Provided always that written order of the Engineer shall not be required for increase or decrease in the quantity of any work upto 15% where such increase or decrease is not the result of any variation order given under this clause but is the result of the quantities exceeding or being less than those stated in the bill of quantities. Provided also that verbal order of variation from the Engineer shall be complied with by the Contractor and the Engineer's subsequent written confirmation of such verbal order shall be deemed to be an order in writing within the meaning of this clause. ***Where written Order for variation is not Needed***
- 7.5 a) The Contractor shall not be entitled to any claim of extra or additional work unless they have been carried out under the written orders of the Engineer. ***Payment for Extra or additional, or omitted work or substituted work, Engineer's powers***
b) The Engineer shall solely determine the amount (if any) to be added to or deducted from the sum named in the tender in respect of any extra work done

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or work omitted by his order.

- c) All extra, additional or substituted work done or work omitted by order of the Engineer shall be valued on the basis of the rates and prices set out in the contract, if in the opinion of the Engineer, the same shall be applicable. If the contract does not contain any rates or prices directly applicable to the extra, additional or substituted work, then the Engineer may decide the suitable rates on the basis of Schedule of Rates (including surcharge in force at the time of acceptance of tender), if any, adopted by the Trustees with due regard to the accepted contractual percentage, if any thereon. In all other cases the Engineer shall solely determine suitable rates in the manner deemed by him as fair and reasonable, and his decision shall be final, binding and conclusive.

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- d) If the nature or amount of any omission or addition relative to the nature or amount of the whole of the contract work or to any part thereof shall be such that, in the opinion of the Engineer, the rate of prices contained in the contract for any item of the works or the rate as evaluated under sub-clauses (b) and (c) of this clause, is by reason of such omission or addition rendered unreasonable or in-applicable, the Engineer shall fix such other rate or price as he deems proper and the Engineer's decision shall be final, binding and conclusive.

8.0 DELAY / EXTENSION OF COMPLETION TIME / LIQUIDATED DAMAGE / TERMINATION OF CONTRACT

- 8.1 Should the quantum of extra or additional work of any kind or delayed availability of the Trustees' materials to be supplied as per contract or exceptionally adverse climatic conditions and natural phenomenon or strikes, lock-outs, civil commotion or other special circumstances of any kind beyond the control of the Contractor, cause delay in completing the work, the contractor shall apply to the Engineer in writing for suitable extension of completion time within 7 days from the date of occurrence of the reason and the Engineer shall thereupon consider the stated reasons in the manner deemed necessary and shall either reject the application or determine and allow in writing the extension period as he would deem proper for completion of the work with or without the imposition of "Liquidated Damage" Clause (No.8.3 hereof) on the Contractor and his decision shall be final and binding on the Contractor. If an extension of completion time is granted by the Engineer without imposition of liquidated damage, from the Clause No.8.3 of the Liquidated damage shall apply from its date of expiry, if the work be not completed within the extended time, unless stated otherwise in the decision communicated by the Engineer, as afore said.

***Extension of
completion time***

- 8.2 a) If the Contractor fails to complete the work within the stipulated dates or such extension thereof as communicated by the Engineer in writing, the Contractor shall pay as compensation (Liquidated Damage) to the Trustees and not as a penalty, ½% (half percent) of the total value of work (contract piece) as mentioned in the letter of acceptance of the tender/offer, for every week or part thereof the work remains unfinished. Provided always that the amount of such compensation shall not exceed 10% of the said value of work. The amount of Liquidated damages shall be determined by the Engineer, which shall be final and binding.

***'Liquidated Damage'
and other
compensation due to
Trustees***

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- 8.2 b) Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation/damage in Sub- clause (a) of this clause, from any money due or likely to become due to the Contractor. The payment or deduction of such compensation/damage shall not relieve the Contractor from his obligation to complete the work or from any of his other obligations/liabilities under the contract and in case of the Contractor's failure and at the absolute discretion of the Engineer, the work may be ordered to be completed by some other agency at the risk and expense of the Contractor, after a minimum three days notice in writing has been given to the Contractor by the Engineer or his Representative.

- 8.3 Without being liable for any compensation to the Contractor, the Trustees may, in their absolute discretion, terminate the contract and enter upon the site and works and expel the Contractor there from after giving him a minimum 3 days' notice in writing, due to occurrence of any of the following reasons and decision of the Trustees in this respect, as communicated by the Engineer shall be final and conclusive:

***Default of the
Contractors
remedies & powers/
Termination of
Contract***

- i) The Contractor has abandoned the contract.
- ii) In the opinion of the Engineer, either the progress of work is not satisfactory or the work is not likely to be completed within the agreed period on account of Contractor's lapses.
- iii) The Contractor has failed to commence the works or has without any lawful excuse under these conditions has kept the work suspended for at least 15 days despite receiving the Engineer's or his Representative's written notice to proceed with the work.
- iv) The Contractor has failed to remove materials from site or to dismantle or demolish and replace work for 7 days after receiving from the Engineer or his representative the written notice stating that the said materials or work were condemned and rejected by him under these conditions.
- v) The Contractor is not executing the works in accordance with the contract or is persistently or flagrantly neglecting to carry out his obligations under the contract.
- vi) Any bribe, commission, gift or advantage is given, promised or offered by or on behalf of the contractor to any officer, servant or representative of the Trustees or to any person on his or their behalf in relation to the obtaining or to the execution of the contract.
- vii) The Contractor is adjusted insolvent or enters into composition with his creditors or being a company goes into liquidation either compulsory or voluntary.

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- 8.3.1 Upon receipt of the letter of termination of work, which may be issued by the Engineer on behalf of the Trustees, the Contractor shall hand over all the Trustees' tools, plant and materials issued to him at the place to be ascertained from the Engineer, within 7 days of receipt of such letter.
- 8.3.2 In all such cases of Termination of work, the Trustees shall have the power to complete the work through any other agency at the Contractor's risk and expense and the Contractor shall be debited any sum or sums that may be expended in completing the work beyond the amount that would have been due to the Contractor, had he duly completed the work of the work in accordance with the contract.
- 8.3.3 Upon termination of contract, the Contractor shall be entitled to receipt payment of only 90% of the value of work actually done or materials actually supplied by him and subject to recoveries as per contract, provided the work done and materials conform to specifications at the time of taking over by the Trustees. The payment for work shall be based on measurements of actual work done and priced at approved contract rates or other rates, as decided by the Engineer. The payment for materials supplied shall be at the rates as decided by the Engineer, which shall in no case be more than market rates prevailing at the time of taking over by the Trustees. The Engineer's decision in all such case shall be final, binding and conclusive.
- 8.3.4 The Trustees shall have the power to retain all moneys due to the Contractor until the work is completed by other agency and the Contractor's liabilities to the Trustees are known in all respect.

9.0 MAINTENANCE AND REFUND OF SECURITYDEPOSIT

- 9.1 On completion of execution of the work the Contractor shall maintain the same for a period, as may be specified in the form of a Special Condition of the Contract, from the date mentioned in the Initial Completion Certificate in Form G.C.1. Any defect/fault, which may appear in the work during aforesaid maintenance period, arising, in the sole opinion of the Engineer or his representative, from materials or workmanship not in accordance with the contract or the instruction of the Engineer or his representative, shall, upon the written notice of the Engineer or his representative, be amended and made good by the Contractor at his own cost within seven days of the date of such notice, to the satisfaction of the Engineer or his representative, failing which the Engineer or his representative shall have the defects amended and made good through other agency at the Contractor's risk and cost and all expenses, consequent thereon or incidental thereto, shall be recoverable from the Contractor in any manner deemed suitable by the Engineer.

***Contractor's
obligation for
maintenance of
work.***

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- 9.2 The Contractor shall not be considered completed and the work shall not be treated as finally accepted by the Trustees, until a Final Completion Certificate in Form G.C.2 annexed hereto shall have been signed and issued by the Engineer to the contractor after all obligations under the Contract including that in the maintenance period, if any, have been fulfilled by the Contractor. Previous entry on the works or taking possession, working or using thereof by the Trustees shall not relieve the Contractor of his obligations under the contract for full and final completion of the work. ***Certificate of final completion***
- 9.3 On completion of the contract in the manner aforesaid, the Contractor may apply for the refund of his Security Deposit by submitting to the Engineer (i) The Treasury Receipts granted for the amount of Security held by the Trustees, and (ii) his "No further claim" Certificate in Form G.C.3 annexed hereto (in original), where upon the Engineer shall issue Certificate in Form G.C.2 and within single months of the Engineer's recommendation, the Trustees shall refund the balance due against the Security Deposit to the Contractor, after making deduction there from in respect of any sum due to the Trustees from the Contractor. ***Refund of Security Deposit***
- 10.0 INTERPRETATION OF CONTRACT DOCUMENTS, DISPUTES AND ARBITRATION
- 10.1 In all disputes, matters, claims, demands or questions arising out of or connected with the interpretation of the Contract including the meaning of Specifications, drawings, designs and instructions or as to the quality of workmanship or as to the materials used in the work or the execution of the work whether during the progress of the works or after the completion and whether before or after the determination, abandonment or breach of the contract the decision of the Engineer shall be final and binding on all parties to the contract and shall forthwith be given effect to by the Contractor. ***Engineer's decision***
- 10.2 If the Contractor be dissatisfied with any such decision of the Engineer, he shall within 15 days after receiving notice of such decision require that the matter shall be referred to Chairman, who shall thereupon consider and give a decision. ***Chairman's award.***
- 10.3 If, however, the Contractor be still dissatisfied with the decision of the Chairman, he shall within 15 days after receiving notice of such decision require that within 60 days from his written notice, the Chairman shall refer the matter to an Arbitrator of the panel of Arbitrators to be maintained by the Trustees for the purpose and any such reference shall be deemed to be a submission to arbitration within the meaning of Indian Arbitration Act, 1940 or any statutory modification thereof. ***Arbitration***
- 10.3.1 If the Arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another person from panel shall be appointed as Sole Arbitrator and he shall proceed from the stage at which his predecessor left it.

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- 10.3.2 The Arbitrator shall be deemed to have entered on reference on the date he issues notice to both the parties fixing the date of first hearing.
- 10.3.3 The time limit within which the Arbitrator shall submit his award shall normally be 4 months as provided in Indian Arbitration Act, 1940 or any amendment thereof. The Arbitrator may, if found necessary, enlarge the time for making and publishing the award, with the consent of the parties.
- 10.3.4 The venue of the arbitration shall be either Calcutta or Haldia as may be fixed by the Arbitrator in his sole discretion. Upon every or any such reference the cost of any incidental to the reference and award respectively shall be in the discretion of the Arbitrator who may determine, the amount thereof or by whom and to whom and in what manner the same shall be borne and paid.
- 10.3.5 The Award of the Arbitrator shall be final and binding on all parties subject to the provisions of the Indian Arbitration Act 1940 or any amendment thereof. The Arbitrator shall give a separate award in respect of each item of disputes and respective claim referred to him by each party and give reason for the award.
- 10.3.6 The Arbitrator shall consider the claims of all the parties to the contract – within only the parameters of scope and conditions of the contract in question.
- 10.3.7 Save as otherwise provided in the contract the provisions of the Arbitration Act, 1940 and rules made there under, for the time being in force, shall apply to the arbitration proceedings under this Clause.
- 10.4 The Contractor shall not suspend or delay the work and proceed with the work with due diligence in accordance with Engineer's decision. The Engineer also shall not withhold any payment, which, according to him, is due or payable to the Contractor, on the ground that certain disputes have cropped up and are likely to be referred to arbitration.
- 10.5 Provided always as follows:
- [a] Nothing of the provisions in paragraphs 10.3 to 10.3.7 hereinabove would apply in the cases of contracts, where tendered amount appearing in the letter of acceptance of the tender / offer is less than Rs.40,00,000/-.
 - [b] The Contractor shall have to raise disputes or differences of any kind whatsoever in relation to the execution of the work to the Engineer within 30 days from the date of occurrence of the cause of dispute and before the preparation of the final bill, giving detailed justifications, in the context of contract conditions.

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- [c] Contractor's dispute if any arising only during the maintenance period, if any, stipulated in the contract, must be submitted to the Engineer, with detailed justification in the context of contract conditions, before the issuance of final completion certificate in Form G.C.-2ibid.

No dispute or difference on any matters whatsoever, the Contractor can raise pertaining to the Contract after submission of certificate in form G.C.3 by him.

- [d] Contractor's claim / dispute raised beyond the time limits prescribed in sub-clauses 10.5[b] and 10.5 [c] hereinabove, shall not be entertained by the Engineer and / or by any Arbitrator subsequently.
- [e] The Chairman / Trustees shall have the right to alter the panel of Arbitrators, vide Clause 10.3 hereinabove, on their sole discretion, by adding the names of new Arbitrators and/ or by deleting the names of existing Arbitrators, without making any reference to the Contractor.

SECTION – VIII

SPECIAL CONDITIONS OF CONTRACT (SCC)

The following **Special Conditions of Contract (SCC)** shall supplement the ITB (Instructions to the Bidder), **General Conditions of Contract (GCC)**. Whenever there is a conflict, the provisions herein shall prevail over those in the ITB & **GCC**.

The tenderer shall visit the site and get themselves acquainted with the existing facilities. Haldia is linked by road through National High Way 6 & 41 via Mechada and by Rail from Howrah and Kharagpur via Panskura. Lock Entrance is situated inside the Dock Area of Haldia Dock Complex (HDC), Syama Prasad Mookerjee Port (SMP), Kolkata [FORMERLY Kolkata Port Trust], 4 Kilo Meters away from the main road.

11.0 Working Facilities :

- a) The following facilities will be provided to the contractor by HDC, SMP, Kolkata under the following terms and conditions :-
 - i) A token License Fee of Rs.100/- per month will be applicable on the open space, to be provided for the purpose of office accommodation, storage of materials and for fabrication work at site, for the period of work. The site office is to be dismantled immediately after the completion period of work and cleared up to the satisfaction of Sr. Dy. Manager (P&E) or his authorized representative.
 - ii) Electrical power for site office will be supplied on chargeable basis as per the SCC, Clause no. 11.15. However power supply for the purpose of execution of work at site will be given free of cost. Necessary length of cable, energy meter and other accessories for the aforesaid purposes shall be arranged by the contractor from the nearest power sources of HDC, at the own risk, cost & arrangement of the contractor.
 - iii) Dock Permit for the contractor and their staff, materials, vehicles, etc. for movement inside the Dock Area, will be provided on chargeable basis.
 - iv) No residential accommodation, transport and canteen facility can be provided by HDC.
 - v) Drinking water supply at the site office of the contractor will be provided on chargeable basis as per SCC clause no. 11.14. However, necessary connection from HDC's water line to be arranged by the contractor from the nearest source of HDC, at the own risk, cost & arrangement of the contractor.

11.1 The tenderer to inform himself fully :

- i) This Tender Document includes all Instructions, General Conditions of Contract, Special Conditions of Contract, Technical Specification & Scope of Work, etc.), considering all addenda (if any) required to be issued subsequently. The Tenderer shall clearly understand that they will be strictly required to conform to all terms & conditions of the Tender Document [considering all addenda (if any) issued] as contained in each of its Clauses and plea of "Customs Prevailing" will not be, in any case, admitted as excuse on their part for infringing of any of the terms & conditions.
- ii) The Tenderer shall be deemed to have examined the Tender Document [including all Instructions, General & Special Conditions of Contract, Technical Specification & Scope of Work, etc.], considering all addenda (if any) issued, visited the site and surroundings and to have obtained all necessary information in all the matters whatsoever that might influence while carrying out the works as per the conditions of the tender and to satisfy themselves to sufficiency of their tender, etc.

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- iii) The Tenderer is advised to acquaint them with the job involved at the site, like availability of labour, means of transport, communication facilities, laws and bye laws in force from Government of West Bengal and Govt. of India and other statutory bodies from time to time. The Tenderer shall be deemed to have examined and collected all necessary information as to risk, contingencies and other circumstances, which may influence or affect the tender.
- iv) Failure to comply with the requirement of the Tender submission will be at the Tenderer's own risk.
- v) Failure to visit the site will no way relieve the contractor of any of their obligation in performing the work and liabilities and responsibilities thereof in accordance with the contract.
- vi) Tenderer shall bear all costs associated with the preparation and submission of their tender and HDC will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the tendering process.
- vii) The Tenderers are requested to ensure that the Tender (both Techno-Commercial Bid and Price Bid) are submitted after full consideration/understanding of the work envisaged in the job related to subject project.

11.2 **Price:**

- i) The Offered Rates [in Price Schedule] shall include all taxes & duties of Central / State / Local bodies [excluding Goods and Services Tax (GST)], as applicable, all incidental charges and charges for packing, forwarding, loading, handling, carrying to any lead, stacking, transportation, permits, overheads & profit, etc. necessary for the complete services, as described in the Price Schedule, Technical Specification & Scope of Work.

GST, as applicable, shall be paid extra against proper invoice submitted by the Contractor.

The Contractor will be required to submit GST compliant invoice with all required details and also be required to file timely and proper return so as to enable SMP, Kolkata to get due credit against GST paid.

In case of any failure on the above account, GST amount, even if paid by SMP, Kolkata, shall be recoverable from the Contractor.

- ii) *The quantities given in the "PRICE SCHEDULE" are indicative only [which may vary (both upward & downward) during execution] and are given to provide a common base for tendering and evaluation. However, the payment will be made on the exact quantity to be executed by the Successful Bidder. No surplus materials will be retained by HDC, SMP, Kolkata.*
- iii) Except where otherwise expressly provided, the contractor shall provide all materials, labour and plant and things necessary in connection with the contract work although everything may not be fully specified and although there may be errors and omissions in the specifications.
- iv) The offered Rates will remain firm till execution of work is completed.

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- v) However, changes **in statutory taxes & duties [other than GST] will be adjusted** (within the scheduled completion period), based on documentary evidence
- vi) Tools, Tackles etc. required for execution of the whole work will have to be arranged by the Contractor, at their own risk, cost & arrangement.

11.3 General terms & conditions related to GST:

- i) The contractor to confirm that the GST amount charged in invoice is declared in its returns and payment of taxes is also made.
- ii) The Contractor shall agree to comply with all applicable GST laws, including GST acts, rules, regulations, procedures, circulars & instructions hereunder applicable in India from time to time and to ensure that such compliance is done within the time prescribed under such laws. Contractor should ensure accurate transaction details, as required by GST laws, are timely uploaded in GSTN. In case there is any mismatch between the details uploaded in GSTN by Contractor and details available with SMP, Kolkata, then payments to Contractor to the extent of GST relating to the invoice/s under mismatch may be retained from due payments till such time SMP, Kolkata is not sure that accurate tax amount is finally reflected in the GSTN to SMP, Kolkata's Account and is finally available to SMP, Kolkata in terms of GST laws and that the credit of GST so taken by SMP, Kolkata is not required to be reversed at a later date along with applicable interest.
- iii) Syama Prasad Mookerjee Port, Kolkata has the right to recover monetary loss including interest and penalty suffered by it due to any non-compliance of tax laws by the contractor. Any loss of input tax credit to SMP, Kolkata for the fault of contractor shall be recovered by SMP, Kolkata by way of adjustment in the consideration payable.
- iv) Supplementary invoices/debit note/credit note for price revisions to enable SMP, Kolkata to claim tax benefit on the same shall be issued by you for a particular year before September of the succeeding Financial Year.
- v) The work order shall be void, if at any point of time you are found to be a black listed dealer as per GSTN rating system and further no payment shall be entertained.

11.4 Evaluation Criteria :

Evaluation with respect to Priced Bill of Quantities (BoQ) is detailed at Clause no. 5.32 of the tender.

11.5 Safety Measures :

The contractor shall adhere to safe construction practice, guard against hazardous and unsafe working conditions and follow all safety precautions for prevention of injury or accidents and safeguarding life and property. The contractor shall comply with relevant provisions of Dock Workers (Safety, Health and Welfare) Act – 1986 and Dock Workers (Safety, Health and Welfare) Regulation – 1990 and Safety Officer of the Trustees or Safety Inspectors shall be afforded all facilities for inspection of the works, tools, plant, machineries, equipments etc. wherever so required. The contractor shall further comply with any instruction issued by the Engineer, Trustees' Safety Officer, Safety Inspector in regards to safety which may relate to temporary, enabling or permanent works, working of tools, plants, machineries, equipments, means of access or any other aspect.

The contractor shall provide all necessary first aid measures, rescue and life saving equipment to be available in proper condition.

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The contractor shall provide PPE's (Personal Protective Equipments) such as, helmet, safety shoe etc. to all workers and shall also provide job specific PPE's e.g. safety belts for working at heights; protective face and eye shield, goggles, hand gloves for welding / gas cutting works; protective foot wear and gloves for hot works; facemasks, gloves and overalls for painting works, mixing and handling materials etc, as directed by the Engineer.

All safety rules shall be strictly followed while working on live electrical systems or installations as stipulated in the relevant safety codes.

Use of hoisting machines and tackles including their attachments, construction tools, machineries and equipments shall comply to the relevant safety codes.

Before allowing workers in sewers, manholes, any duct or covered channel etc, the manhole covers shall have to be kept open and ventilated at least one hour in advance and necessary safety torches / lamps should be inserted first before allowing entry to the worker. Suitable hand gloves and other safety gear will be provided to the worker during handling / removing of slushes / sludge etc. without any extra cost. The contractor shall adopt all the above safety measures at his own cost.

The successful bidder shall also ensure that –

- (i) No damage is caused to plants and vegetations unless the same is required for execution of the project proper.
- (ii) The work shall not pollute any source of water / land / air surrounding the work site so as to affect adversely the quality or appearance thereof or cause injury or death to animal and plant life.
- (iii) His office & labour hutment etc. shall be maintained in a clean and hygienic condition through out the period of their use and different effluents of the labour hutment shall have to be disposed off suitably.

11.6 Holiday or Sunday Work :

Subject to provisions in local Acts and any statutes of the State, the Contractor shall arrange for working on Holidays and Sundays whenever so desired by the Engineer to expedite progress and complete the works in time.

The Contractor shall not be entitled to any additional payment for taking up works on Holidays and Sundays. The Contractor should be prepared to resort to round-the-clock working by following shift timings for labour.

11.7 Keeping The Site and Working Area Clear:

The Contractor shall at all times keep the site and working areas free from all surplus materials, rubbish and offensive matter all of which shall be disposed off in a manner to be approved by the Engineer's Representative. As the works will be carried out mainly inside of operational buildings of HDC, the Contractor has to make necessary arrangement to clear the rubbishes etc. from the buildings, at the end of day's work at his own cost & risk.

11.8 Labour, Tools & Plants :

The Contractor shall supply all necessary labour, tools and plants required for satisfactory execution of the work.

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11.9 Escalation / Variation on Prices :

No Escalation / Variation on the prices on any account will be considered for adjustment / payment in the contract.

11.10 Contract Labour Laws :

The Contractor must comply with the provisions of Contract labour (Regulation & Abolition) Act 1970 and Contract Labour (Regulation & Abolition) Central Rules 1971 and the rules framed there under with all modifications/amendments being enforced from time to time.

The Contractor shall indicate maximum number of workmen to be engaged on any day for execution of the work in the appropriate place in the ABSTRACT FORM OF TENDER & he shall have to obtain a regular /permanent license as per sec12(1) of the Contract Labour Act.

Further , whenever a contract work has commenced or completed , the contractor has to intimate the same to the Assistant Labour Commissioner(Central) /labour Enforcement Officer (Central) in Form IV-A , within 15 days of such commencement or completion.

The contractor has to obtain a certificate of registration under “Building & Other Construction Workers (Regulation of Employment & Conditions of Service) Act-1996 and Central Rule 1998 and his rate shall include a cess payable @ 1 % of the cost of construction as applicable under “Building & Other Construction Workers Welfare Cess Act -1996 & Welfare Cess Rules 1998.

The contractor has to arrange for displaying the name of the Regional Labour Commissioner (Central), Asst. Labour Commissioner (Central) & Labour Enforcement Officer (Central) at his worksite(s).

The contractor shall inform the Principal Employer the date, time & venue of disbursement to be made by him to his workers.

The successful bidder shall also be required to put up a notice at the site of work mentioning the date, time & venue of disbursement to be made by him to his workers and he or his authorized representative shall have to be present during period of disbursement.

11.11 Compliance With E.P.F & M. P. Act :

The successful contractor will have to comply with provision of EPF & MP Act –1952 (along with amendments, if any), issued from time to time.

If asked for by the Employer, the contractor will be required to submit photocopy of all payment challans and produce the original for verification to the representative of the principal employer, i.e. Sr. Dy. Manager (P&E).

11.12 Indemnification :

The successful bidder shall be deemed to indemnify and keep indemnified the Trustees from and against all actions, claims, demands and liabilities whatsoever under and in respect of the breach of any of the provisions of any law, rules or regulations having the force of law, including but not limited to –

- a) The Minimum Wages Act, 1948.
- b) The Dock Workers (Regulation Of Employment) Act, 1948
- c) The Building And Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996

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- d) The Dock Workers' Safety, Health & Welfare Act , 1986
- e) The Payment of Wages Act, 1936.
- f) The Workmen's Compensation Act, 1923.
- g) The Employees Provident Fund Act, 1952.
- h) The Contract Labour (Regulation and Abolition) Act, 1970; Rules 1971.
- i) The Payment of Bonus Act, 1965.
- j) The Payment of Gratuity Act, 1972.
- k) The Equal Remuneration Act, 1976.
- l) The Employees State Insurance Act, 1948 & Employees State Insurance (Amendment) Act ,1989
- m) Child Labour (Prohibition and Regulation) Act, 1986.
- n) The Maternity Benefits Act 1961
- o) Interstate Migrant Workmen (Regulation of Employment & Conditions Of Service) Act,1979.
- p) Motor Vehicle Act, latest revision.

11.13 Dock Permit:

Necessary Gate Pass for entering into the Dock Area would be issued for the personnel, equipment, machineries, materials etc. of the Contractor, in connection with the instant work, on chargeable basis, as per rules then prevailing, on the basis of written request from the Contractor.

11.14 Supply of water:

Billing against supply of water will be done on the basis of actual consumption recorded through water meter at the rate **INR 38.65 (including overhead charges @ 19.25%) per KL of Fresh Water** [As directed by **TAMP (Tariff Authority for Major Ports)**], **with escalation @ 5% per annum.**

The **water consumption charges** [based on the prevalent rates of SMP, Kolkata, as may be amended from time to time] shall have to be paid by the Contractor immediately, on receipt of the bill from the office of the Finance Division, Haldia Dock Complex. All payment on this account should be updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor's bill(s).

The **water consumption charges** [based on the prevalent rates of SMP, Kolkata, as may be amended from time to time] shall have to be paid by the Contractor immediately, on receipt of the bill from the office of the Finance Division, Haldia Dock Complex. All payment on this account should be updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor's bill(s). All necessary tools and tackles, fixtures and any other arrangements as would be felt necessary by the contractor to carry out the tendered work, shall have to be arranged by them at their own cost and liability.

11.15 Supply of Electricity:

Electricity charges will be determined on the basis of **Chargeable Unit (kWh)** [actual **Unit (kWh) consumed** (recorded through Energy Meter) **plus 3%** on actual Unit consumed] and applicable rate of **West Bengal State Electricity Distribution Company Limited (WBSEDCL)**. Billing will be done on the basis of **Electricity charges** and overhead charges @ 19.25% [on the aforesaid **Electricity charges**] as per the notification of **Tariff Authority of Major Ports (TAMP)**.

The **Electricity consumption charges** [based on the prevalent rates of **WBSEDCL**, as may be amended from time to time] shall have to be paid by the Contractor immediately,

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on receipt of the bill from the office of Finance Division, Haldia Dock Complex. All payment on this account should be updated, otherwise the pending bill amount, along with late payment surcharge, will be recovered from the Contractor's bill(s).

11.16 Payment Terms :

Payment to the Successful Bidder will be made stage-wise as indicated below :-

a) Against Supply & Delivery :

Payment for 70% amount of each item will be made against supply of respective item at site and submission of bills along with Custodian Certificate and other relevant documents like Inspection Reports, Challans, etc.

Payment for 20% amount of each item will be made against installation of the respective item and submission of bills along with Installation Certificate.

Payment for 10 % amount will be made against Testing, successful commissioning, taking over the commissioned job by SMP, Kolkata and submission of bills, along with Job Completion Certificate.

b) Against Installation and Commissioning :

Payment for 90% amount of each item will be made against installation of the respective item and submission of bills along with Installation Certificate.

Payment for 10 % amount will be made against Testing, successful commissioning, taking over the commissioned job by SMP, Kolkata and submission of bills, along with Job Completion Certificate.

Payment will be made (at the accepted rates) within 30 days from the date of submission of clear & unambiguous bill, along with relevant documents / certification against the completed work, on the basis of actual measurement of completed work, in line with the "Schedule of items".

Bills should be submitted, in triplicate, to Sr. Dy. Manager (P&E), 1ST floor, Chirinjibpur operation building, Plant & Equipment Division, Haldia Dock Complex, SMP, Kolkata along with required certification / inspection report.

Payment will be made in Indian Rupees through the banker of the Contractor (i.e. through ECS). During submission of bill(s), the following information must be submitted by the Contractor regarding their banker:

- i) Bank Account number.
- ii) Name of the bank.
- iii) Name of the branch.
- iv) Address of the branch.
- v) MICR code of the branch.

11.17 Performance Guarantee / Security Deposit

Within **twenty-eight (28) days** of issuance of "Letter of Acceptance (LOA)", the Contractor shall have to provide an irrevocable and unconditional Bank Guarantee, from a Nationalized Bank/Scheduled Bank in India, in the amount, 3% of the contract value excluding GST, in the form Banker's Cheque or by Demand Draft of a **Nationalized Bank of India** drawn in favour of 'Syama Prasad Mookerjee Port Trust, **Kolkata, Haldia Dock Complex**' and payable at **Haldia** – with Sr. Dy. Manager (Finance), HDC, SMP, Kolkata, which shall be retained as Security Deposit till successful expiry of the guarantee period. In all cases, any dispute regarding Bank Guarantee will be adjudicated under the jurisdiction of Kolkata High Court.

This Security Deposit / Performance Bank Guarantee should be kept valid and enforceable till a date, covering at least 3 (three) months beyond the date of expiry of the Defect Liability Period of the Contract job [for the materials, installations & workmanship, with

respect to the instant work, as a whole. In case the actual duration of the aforesaid Defect Liability Period is required to be extended, the validity of this Bank Guarantee shall have to be extended till a date, covering at least 3 (three) months beyond the date of expiry of such extended duration of the Defect Liability Period.

Failure of the Contractor to submit the aforesaid Performance Bank Guarantee and in the manner stated above, shall constitute sufficient grounds for termination of the contract and forfeiting the Earnest Money Deposit.

The Security Deposit will be refunded, without interest, after the successful execution of the order and completion of the guarantee period and submission of 'No Claim Certificate'.

11.18 Liquidated Damage:

If the event of contractor's failure to complete the work within the stipulated dates (Completion period) or such extension thereof, as communicated by the Engineer, in writing, the Contractor shall pay as compensation (Liquidated Damage) to the Trustees and not as a penalty, as per the following: In case of handing over the Contract Job after the scheduled completion period, Liquidated Damage @ ½% of the Contract Price [excluding GST], for every week or part thereof, beyond the scheduled date of completion, will be deducted from the Contractor's bill. Provided always the amount of such compensation shall not exceed 10% of the cost of the Contract Price [excluding GST]. The Trustees may, without prejudice to any other method of recovery, deduct the amount of such damages from any money which is due or which may become due to contractor. The payment or deduction of such damages shall not relieve contractor from their obligation to complete the job or from any other of their obligation or liabilities under the contract. GST will be applicable on L.D amount.

11.19 Inspection and testing :

The Employer shall appoint a **Third Party Inspection Agency**, at the cost of the Employer, for stage-wise technical inspection and certification of **materials & workmanship**, including **painting, erection, commissioning**, etc. [in connection with the contract job, as a whole]. The relevant Certificates shall be produced by the **Third Party Inspection Agency** to the Engineer or his authorised Representative. The stage-wise technical inspection will be carried out by the **Third Party Inspection Agency** based on the approved **Quality Assurance Plan (QAP) & Field Quality Assurance Plan (FQAP)** [considering the Technical Specification of the bidding documents].

The Contractor shall have to submit a Quality Assurance Plan (QAP) and a Field Quality Assurance Plan (FQAP), based on the Technical Specification and other terms & conditions stipulated in the bidding documents. The QAP & FQAP shall be approved by the "Engineer", after the same are duly recommended by the Third Party Inspection Agency. The Technical Inspection & Certification will be carried out by the Third Party Inspection Agency, in accordance with approved QAP & FQAP.

In all cases where tests are required, within the purview of QAP & FQAP, whether at the premises of the Contractor or any Sub-contractor or elsewhere, the Contractor, except where otherwise specified, shall provide free of charges such labour, materials, electricity, fuel, water, stores, apparatus and instruments, as may reasonably be demanded, to carry out sufficiently such tests and shall, at all times, facilitate the Engineer or his Representative and the Third Party Inspection Agency, to accomplish such testing.

The cost of all tests and/or analyses, within the purview of QAP & FQAP, effected at the Contractor's or Sub-contractor's works and on the site, shall be borne by the Contractor. The Contractor will be called upon to pay all expenses incurred by the Employer in respect of any work found to be defective or of inferior quality, adulterated or otherwise unacceptable.

If, during inspection by the **Third Party Inspection Agency [appointed by SMP, Kolkata]**, any material or test [within the purview of QAP & FQAP] fails to fulfil the contract conditions for **more than 2 (two) times**, any additional amount charged by the **Third Party Inspection Agency towards inspection of the same from the 3rd time onwards shall have to be borne by the Contractor**. If the

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

Contractor fails to make such payment to the **Third Party Inspection Agency**, the same shall be deducted from the bill(s) of the Contractor and paid to the **Third Party Inspection Agency**.

Quality of materials, to be provided by the Contractor under this contract, should be as per the satisfaction of the Engineer. Whenever asked, the Contractor shall have to provide free sample for testing.

If found necessary, SMP Kolkata reserves the rights to get the materials inspected from a **Government or Government recognized Laboratory/Test House.**

In case of sub-letting to other Contractors or manufacturers or suppliers by the Contractor, the Engineer will reserve the right as follows:

- i. that inspection and / or testing will be carried at the Sub-contractor's works; or
- ii. that inspection will be carried out at site; or
- iii. that inspection will be waived, subject to the Contractor furnishing a certificate of compliance with specification by a competent authority recognised by national/international institutes.

Notwithstanding the fact that the materials or installations have passed the inspection, the Contractor is not relieved from his obligations to conform to the quality, workmanship, guaranteeing the performance, etc., as per the contract.

11.20 Tests on completion:

On **completion of installation**, the contractor shall give a **7 (seven) days'** notice to the Engineer [with a copy to the **Third Party Inspection Agency, appointed by SMP, Kolkata**], in writing (informing the date on which they will be ready to make the tests), before carrying out such tests, in accordance with and in the manner prescribed in the specifications.

If any portion of work fails under the tests to fulfil the contract conditions, tests of the faulty portion shall, if required by the **Third Party Inspection Agency (appointed by SMP, Kolkata)** or the Engineer or by the Contractor, be repeated within reasonable time, upon the same terms and conditions.

If such "**Tests on completion**" cannot be carried out successfully by the Contractor within 1 (one) month after the time fixed by the Contractor and if, in opinion of the Engineer, the tests are being unduly delayed, the Engineer may, in writing, call upon the Contractor, with 7 (seven) days' notice, to make such tests, failing which the Engineer may proceed to make such tests himself, at the Contractor's risk and expense. In the above eventuality, the Employer shall, nevertheless, have the right of using the installations at the Contractor's risk until the "**Tests on completion**" are successfully carried out.

11.21 Completion Period :

All the jobs (including submission of As Built Drawings), as per contract, are to be completed within **12 (Twelve) months from the date of** issue of Letter of Acceptance (LOA) [i.e. **award of contract**].

11.22 Taking over of the Contract job :

The **Contract job** will be taken over by HDC, SMP Kolkata after completion of the works in accordance with the contract, having passed all the tests under "**Tests on completion SCC clause No.11.20**".

11.23 Defect Liability Period (DLP) :

11.23.1 “Defect Liability Period” of the Contract job:

“Defect Liability Period” of the Contract job [for the materials, installations & workmanship, with respect to the instant job, as a whole] shall mean the Guarantee Period, which starts from the date of taking over the Contract job [as per **SCC Clause No. 11.22** (Taking over of the Contract job by SMP Kolkata)] and will continue till expiry of **24 (twenty-four) months**, calculated from the date of taking over the Contract job.

During “Defect Liability Period” of the Contract job, the Contractor shall nominate 2 (Two) competent, experienced and responsible technical person, to co-ordinate and execute all works to be attended by the Contractor, as per contractual obligations, without any extra cost to HDC, SMP, Kolkata.

The Contractor shall be responsible for making good (including replacement of defective items, if required), with all possible speed, at their expense, any defect in or damage to any portion of the work, which may appear or occur after the Contract job has been taken (Taking over of the Contract job by SMP Kolkata)] and before expiry of Defect Liability Period [as specified in **SCC**] and which arises either:

- i. from any defective materials, workmanship or design, or
- ii. from any act or omission of the Contractor done or omitted during the said period.

11.24 Defects after taking over :

After the taking over of the Contract job, if the same cannot be used (for the purpose for which it is intended), during any period, by the reason of a defect or damage, the **Defect Liability Period** shall be extended accordingly. If only a **portion** of the **Contract job** is affected, the **Defect Liability Period** shall be extended [in case the defects is not rectified or defective materials is not replaced within 12 (twelve four) hours of its occurrence] only for that portion, provided the other portions of the **Contract job** remains in order, fulfilling contract conditions. In neither case shall the **Defect Liability Period** be extended beyond **24 (twenty four) months** [from the date of taking over the **Contract job**] for the materials, installations & workmanship, with respect to the instant job, as a whole.

If any such defect or damage be not remedied by the Contractor within a reasonable time, HDC, SMP Kolkata may proceed to do the work at the Contractor’s risk and expense, but without prejudice to any other rights which HDC, SMP Kolkata may have against the Contractor in respect of such defects.

All inspection, adjustments, replacement or renewal carried out by the Contractor during the period referred in this clause shall be subject to the conditions of this contract, which shall be binding on the contractor in all respects during the **Defect Liability Period** and its extension, if any.

11.25 Force Majeure

In the event of either party rendered unable by Force Majeure to perform any obligation required to be performed by them under the Contract, relevant obligation of the party affected by such Force Majeure shall upon notification to the other party be suspended for the period which Force Majeure events lasts. The cost and loss sustained by the either party shall be borne by the respective parties.

The term “Force Majeure” as employed shall mean the events as below:

- (i) riot (unless solely restricted to or perpetuated by employees of the Contractor or his subcontractors / suppliers or occurring outside India) so far as it is uninsurable;

(ii) war, hostilities (whether war be declared or not), invasion, directed to or by India or act of foreign enemies, directed to India;

(iii) rebellion, revolutions, insurrection, or military or usurped power, or civil war in India;

(iv) Fire, flood, cyclone, hurricane and acts of God.

Time of performance shall be extended by the period of delay, which is directly caused by the Force Majeure. Upon the occurrence of such cause and upon its termination, the party alleging that it has been rendered unable as aforesaid shall notify the other party in writing immediately but not later than forty eight hours of the alleged beginning and ending thereof, giving full particulars and satisfactory evidence in support of his claim.

Time of performance of the relative obligation suspended by the Force Majeure shall stand extended by the period for which such event lasts and affects the relative obligation directly. Such extension of time shall be without prejudice to the provision that time is essence of the Contract and any other terms and conditions related to time of completion as may be provided elsewhere in the Contract

If the work is affected by Force Majeure lasting for more than 60 days at a stretch, the parties to the Contract shall settle the issue mutually.

11.26 The contractor shall commence the work within 07 (Seven) days after the issuance of LOI.

11.27 Input Tax Credit:

Please indicate present percentage rate of GST, as applicable on quoted price. GST amount will be paid against submission of GST documents only or any other document required by **SMP, Kolkata**. The contractor shall be required to upload the details of Invoice raised on SMP, Kolkata in GST Return as per Law. In case of any failure, GST, even if paid, shall be recovered from the Contractors.

11.28 Report of Accident :

The contractor shall, within 24 (twenty four) hours of the occurrence of any accident, at or near the site or in connection with the execution of the work under the contract, report the accident to the Engineer or his representative(s) and shall make every arrangement to render all possible assistance to the victim(s) of such accident. The contractor shall also report such accident to the competent authority, whenever such a report is required by law. For any accident occurred within the entire operational area covered under the contract, the contractor shall ensure prompt investigation into the matter through recording of statement of the personnel witnessing the accident. The report containing the findings, along with the statements so recorded, will then be forwarded by the contractor to the Engineer at the earliest. At the first instance, an 'Accident Report' shall be prepared (in triplicate) by the concerned Supervisor / Engineer on duty, engaged by the contractor, and a copy of the same to be forwarded immediately to the Engineer.

11.29 ARBITRATION:

In case of any dispute being referred to arbitration in terms of General Conditions of Contract, same would be held as per provision of Arbitration and Conciliation (Amendment) Act 2015.

11.30 SMP, Kolkata, HDC shall encash the Bank Guarantee in the event of the contractor failing to complete the work as per tender specification, at the order of Engineer or his authorized representative, or when the contractor has defaulted for more than 30 days or when any amount is to be recovered from the Contractor as penalty or deduction and the contractor fails to remit such amount within 30 days after due notice given to him in this regard.

11.31 The Sr. Dy. Manager (P&E), HDC shall have the right to ask for the extension of the above Bank Guarantee till such time the Contractual obligations are fulfilled and the Contractor will be duty bound to extend the same.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

- 11.32** If excess work is required to be carried out in addition to the quantities stipulated in BOQ, the amount will be paid as per unit rate quoted in BOQ as per actual measurement. In case of extra work the same will be paid as per rate of PWD schedule rate/ rate of reputed manufacturer /market rate, as the case may be with justification of rate. Job completion certificate in the form of GC-1 will be issued by the Engineer after successful completion of work, as per tender, including excess & extra, if any.
- 11.33** The payment will be made on the exact quantity to be executed by the Successful Bidder. No project surplus materials will be retained by HDC, SMP, Kolkata.
- 11.34** All materials are to be supplied progressively as required at site subject to prior approval of Engineer or his representative.
- 11.35** **Custodian Certificate:** After delivery at site, the supplied materials are to be inspected / verified by HDC, SMP, Kolkata officials and the custodian certificate is to be issued by the Contractor in this regard, to the Engineer or to his authorised representative (s), for installation of such materials in the instant work. All the supplied materials will be under the custody of contractor till handover of the project.
- 11.36** The firm /contractor shall at all times, during execution of the contract, including defect liability period, obey and observe all directions and instructions given by the Engineer or his authorized representative.
- 11.37** The contractor shall have to submit program of work in the form of bar chart regarding different activities of the project with tentative date at the beginning of the project. Thereafter, with 15 days interval, the contractor shall have to submit project status thorough mail for monitoring the project to avert delay in project.
- 11.38** Termination of contract and Risk Purchase Clause: Will be applicable as per clause No. 8 of SMP, Kolkata's General Conditions of Contract.
- 11.39** In case of any dispute, question or difference either during the execution of the work or any other time as to any matter or thing connected with or arising out of this Contract, the decision of the Engineer, Syama Prasad Mookerjee Port, Kolkata, thereon shall be final and binding upon all parties.
- 11.40** Good Conduct: If a bidder has had previous history of "defined misconduct" (such as banning from/ by any government sector, premature termination of a contract solely on bidder's fault, criminal case pending against the company or its owner/ current director filed by a government entity etc.), his offer is liable to be rejected.
- 11.41** All other terms and conditions excepting those mentioned separately shall be governed by Syama Prasad Mookerjee Port, Kolkata's General Condition of Contract.
- 11.42** In addition to the above, a bidder may be disqualified if:-
- i. The bidder provides misleading or false information in the statements and documents submitted.
 - ii. Record of unsatisfactory performance during the last seven years, such as abandoning of work or rescinding of contract for which the reasons are attributable to the non-performance of the contractor or inordinate delays in completion or financial bankruptcy, etc.

The decision of Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata in this regard shall be final and binding on the Bidder.

SECTION-IX

BIDDING FORMS

BIDDING FORM – I

MINIMUM ELIGIBILITY CRITERIA

[To be filled up and uploaded, duly signed & stamped]

(I) ANNUAL TURNOVER STATEMENT

The annual turn over of(name of the bidding firm), for the years **2019-20, 2020-21 and 2021-22**, based on the **Balance Sheets and Profit & Loss Accounts**, are given below:

Financial years	Turnover (as per Auditor's Report / Balance Sheet) [in Rs]
2019-2020	
2020-2021	
2021-2022	
<i>Total</i>	
<i>Average Annual Turnover</i>	

SIGNATURE OF CHARTERED ACCOUNTANT ::

NAME OF CHARTERED ACCOUNTANT ::

(COMPANY SEAL)

NOTE: Copy of Balance Sheets and Profit & Loss Accounts enclosed with sealed & signed

(II) **TECHNICAL EXPERIENCE**

Sl. No.	Contract No. / Order No. and date	Name of the Employer and Place of work	Contract value [in Rs.]	Date of completion of work	Page number(s) of reference / supporting document (s), uploaded.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

BIDDING FORM-II**OTHER DOCUMENTS**

[To be filled up and uploaded, duly signed & stamped]

	Requirement	Submitted/Not submitted [Put √ if submitted & X if not submitted]	Validity/ For the month of
a)			
i)	GST Registration Certificate.	<input type="text"/> If submitted, Page Number(s):	Not applicable.
ii)	Document in support of non-applicability.	<input type="text"/> If submitted, Page Number(s):	Not applicable.
b)			
i)	Profession Tax Clearance Certificate (PTCC) <u>OR</u> Profession Tax Payment Challan (PTPC)	If submitted, Page Number(s):	
ii)	Document in support of non-applicability.	If submitted, Page Number(s):	Not applicable.
c)			
i)	Certificate for allotment of EPF7Code No.	<input type="text"/> If submitted, Code No.: Page Number(s):	Not applicable.
ii)	Latest EPF Payment Challan.	<input type="text"/> If submitted, Page Number(s):	
iii)	Document in support of non-applicability.	If submitted, Page Number(s):	Not applicable.
d)			
i)	Registration Certificate of ESI authority	<input type="text"/> If submitted, Code No: Page Number(s):	Not applicable

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

	Requirement	Submitted/Not submitted [Put √ if submitted & X if not submitted]	Validity/ For the month of
ii)	Affidavit, Declaration and Indemnity Certificate.	<input type="checkbox"/> If submitted, Page Number(s):	Not applicable.
e)	PAN Card	<input type="checkbox"/> If submitted, PAN No.: Page Number(s):	Not applicable.
f)	MSME / MSE / DIC / SSI / NSIC certificate	<input type="checkbox"/> If submitted, Page Number(s):	
g)	Power of Attorney	<input type="checkbox"/> If submitted, Page Number(s):	
h)	Bid security declaration	<input type="checkbox"/> If submitted, Page Number(s):	

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

BIDDING FORM-III

GENERAL INFORMATION OF THE BIDDER

[To be filled up and uploaded, duly signed & stamped]

1.	Bidder's Legal Name (IN CAPITALLETTERS)		
2.	a)	Country of registration.	
	b)	Year of registration.	
	c)	Legal address in country of registration.	
	d)	URL of the bidder.	
3.	Information regarding bidder's authorised representative(s) / contact person(s)		
	a)	Name(s)	
	b)	Address(es)	
	c)	Telephone number(s)	
	d)	Facsimile number(s)	
	e)	Electronic mail address	
4.	a)	Address of the branch office, if any	
	b)	Name of the contact person at branchoffice	
	c)	Telephone number(s)	
	d)	Facsimile number(s)	
	e)	Electronic mail address	

5.	Whether the bidder is a Proprietorship Firm or Partnership Firm or Limited Company .		
6.	Details of the Banker(s) :		
	a)	Name of the Banker(s) in full.	
	b)	Address(es) of the Banker(s)	
	c)	Telephone number(s)	
	d)	Facsimile number(s)	
	e)	Electronic mail address	
	f)	Name(s) of the contact person(s)	
7.	Bank details for ECS payment :		
	a)	Bank Account number.	
	b)	Name of the bank.	
	c)	Name of the branch.	
	d)	Address of the branch.	
	e)	RTGS code of the branch.	
	f)	MICR code of the branch.	
8.	Income Tax and Goods & Services Tax (GST) details (if applicable):		
	a)	Permanent Account Number (PAN)	
	b)	GST Registration Number (GSTIN)	
9.	Employees' Provident Fund (EPF) Code No.		
10	Employees' State Insurance (ESI) Code No.		
11	Mainlines of business		

BIDDING FORM-IV

FORMAT FOR DECLARATION

[To be printed on the bidder's Letter Head and uploaded after signing]

To,

**General Manager (Engineering)
Haldia Dock Complex,
Syama Prasad Mookerjee Port, Kolkata**

Name of Work: “Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.”.

Tender No. SDM(P&E)/T/06/2023-24

I....., the authorized signatory of the
..... (Name of the Company /Firm) do hereby declare /
confirm that :

* I / We have not been **debarred, banned or delisted** by any Government or Quasi-Government Agencies or Public Sector Undertakings in India.

I / we have not made any **addition / modification / alteration** in the **Bidding Documents** (including Bidding Forms & Contract Forms) hosted in the websites.

The prices have been quoted in the Price Bid, electronically, through the website <https://kopt.enivida.in> only and no direct or indirect mention of the prices has been made by me / us anywhere else in my / our bid.

No extraneous conditions (like “Not Applicable”, conditional rebate, etc.), regarding the Price Bid, have been mentioned anywhere in our bid.

**Signature of authorised person of the bidder
(with office seal)**

- In case the **firm** has been debarred or banned or delisted by any Government or Quasi-Government Agencies or Public Sector Undertaking in India, then the same should be declared properly, after modifying the sentence, suitably.

BIDDING FORM-V

FORM OF TENDER

[To be printed on the bidder's Letter Head and uploaded after signing]

To,

**General Manager
(Engineering)Haldia Dock
Complex, Syama Prasad
Mookerjee Port, Kolkata**

Name of Work: “Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.”.

Tender No.: SDM(P&E)/T/06/2023-24

I/We (Name of the bidder)..... of
.....(Address of the bidder)Having
examined the site of work, inspected the drawings and read the bidding documents[including
all addenda / corrigenda, issued i.e {insert Addendum
/Corrigendum /Extension No(s)}], hereby bid and undertake to execute & complete all the
work related to “ Operation & Maintenance of Mechanized Coal Handling Plant, for handling of
Iron Ore, at Haldia Dock Complex” required to be performed in accordance with the
**Technical Specification, General Conditions of Contract(GCC), Special Conditions of
Contract (SCC)**, etc., at the **rates & prices** quoted in the **Price Bid** [*submitted electronically,
through the website <https://kopt.enivida.in>*], within month from the date of order
to commence the work , in the event of our
bid being accepted.

I/we also undertake to enter into a **Contract Agreement** in the form hereto annexed [**Section
XI**] with such alterations or additions thereto, which may be necessary to give effect to the
acceptance of the bid and incorporating such **Technical Specification, General Conditions of
Contract (GCC), Special Conditions of Contract (SCC)**, etc. and I/we hereby agree that until
such **contract agreement** is executed, the said **Technical Specification, General Conditions of
Contract (GCC), Special Conditions of Contract (SCC)**, etc. and the bid, together with the
acceptance thereof in writing, by or on behalf of the Employer, shall be the contract.

I / We requiredays preliminary time to arrange and procure the
materials, tools & tackles, etc. required by the work, from the date of acceptance of bid, before
I/we could commence the work.

I / We have submitted “Bid Security Declaration” towards EMD, duly filed in, signed &
stamped, as per format attached.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied
works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

I/We agree that the period for which the bid shall remain open for acceptance, shall not be less than **Days**, from the last date of submission of bid.

(Signature of authorized person of the bidder)

WITNESS:
Signature:

Name: _____

Name:
(In Block Letters)

Designation: _____

Address:

Date: _____

Occupation:

(Office Seal)

BIDDING FORM-VI**PRICE SCHEDULE**

[To be filled up and uploaded, duly signed & stamped]

SL. No.	DESCRIPTION	UNIT	QTY	CGST/SGST (%)	IGST (%)
1	<u>33KV(UE) XLPE, HT Cable:-</u> Supply and laying of 3 C x 120 Sq.mm. HT Aluminum XLPE cable as per Technical Specification & Scope of Work.				-
(i)	Supply	Mtr	250		
(ii)	Laying through existing RCC trench/Hume Pipe/ GI Pipe/Cable tray/GI Structure.	Mtr	250		
2	<u>33KV (UE) XLPE, HT Cable end termination and straight through jointing:-</u> Supply and installation of heat Shrinkable type end termination kit for three Core 120 Sq.mm. HT 33 KV (UE) Aluminum XLPE cable.				
(i)	Supply of Indoor/Outdoor end termination kit	No.	12		
(ii)	Installation of indoor/outdoor end termination kit and testing and commissioning	No.	12		
3	<u>HT 33KV VCB Panel:-</u> Design, fabricate, supply, installation, testing and commissioning of indoor HT 33KV VCB Panel 1250A, 3 phase, 50HZ, 31.5KA for 3sec. as per the Technical Specification(9 panel VCB + bus riser).				
(i)	Supply	Set	1		
(ii)	Installation, testing and commissioning	Set	1		
4	<u>6MVA Power Transformer:-</u> Design, Manufacture, supply, installation, testing and commissioning of following 33/3.3 KV ,6MVA ,oil filled Outdoor duty transformers with On Load tap changer, RTCC Panel & marshalling box of make as per the Technical Specification.				
(i)	Supply of 33/3.3 KV, 6MVA Power Transformer	No.	2		
(ii)	RCC Foundation	No.	2		
(iii)	Installation, testing and commissioning	No.	2		
5	<u>3.3KV(UE) XLPE, HT Cable:-</u> Supply and laying of 3C x 400 Sq.mm. HT Aluminum XLPE cable including end-terminations as per Technical Specification & Scope of Work.				
(i)	Supply	Mtr	450		
(ii)	Laying through existing RCC trench/Hume Pipe/ GI Pipe/ cable tray.	Mtr	400		
(iii)	Laying by excavating trench.	Mtrs.	10		
(iv)	Laying through 150mm dia. Hume pipe to be laid after excavating including supply of Hume pipe.	Mtrs.	20		

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

(v)	Laying through 150NB GI Pipe to be laid after excavating, including supply of Pipe	Mtrs.	20		
6	<u>3.3kV (UE) XLPE, HT Cable end termination and straight through jointing:-</u> Supply of straight through and heat Shrinkable type end termination kit for 3C x 400 Sq.mm. HT 3.3 kV (UE) Aluminum XLPE cable.				
(i)	Supply of Indoor end termination kit	No.	15		
(ii)	Supply of st. through jointing kit	No.	2		
(iii)	Installation of indoor end termination kit and testing and commissioning	No.	15		
(iv)	Installation of straight through jointing kit and testing and commissioning	No.	2		
7	<u>Copper cable:-</u> Supply laying and termination of armoured copper Power/control cable as per Technical specification & Scope of Work.				
(i)	Supply and Laying through cable tray and termination with gland and copper lugs for 3C X 2.5Sqmm armoured copper power cable	Mtrs.	300		
(ii)	Supply and Laying through cable tray and termination with gland and copper lugs for 12C X 2.5Sqmm armoured copper control cable	Mtrs.	250		
8	<u>DCDB, Battery Charger with batteries:-</u> Supply and Installation of DCDB, Maintenance Free Lead Acid battery of 55Nos. of 2Volts each for 110V,180AH Battery Bank with Float-cum-Boost Charger as per Technical specifications.				
(i)	Supply	set	2		
(ii)	Installation, testing and commissioning	set	2		
9	<u>Dismantling of existing HT switchgear Panel & Transformer:-</u>				
(i)	HT Panel-(31No. Breakers)	LS	1		
(ii)	33/3.3KV, 6MVA (02Nos.) with existing foundation and RTCC Panel.	LS	1		
(iii)	Existing HT/ LT cables	LS	1		
(iv)	Existing Bus duct /LV Panel	LS	1		
10	<u>Re-Location of existing Panel:-</u> Relocation includes				
(i)	Supply of necessary material for commissioning of VCB Panel.	LS	1		
(ii)	Installation, testing and commissioning of VCB Panel.	LS	1		
11	<u>Cable Tray and support structure:-</u>				
(i)	Supply of GI ladder type Cable tray 600mm	Mtrs.	250		
(ii)	Supply of GI Support structure(Angle/ channel/plate)	MT	2		
(iii)	Supply of GI perforated type Cable tray 100mm	Mtrs.	100		
(iv)	Installation, fixing of GI Support Structure and GI Cable tray.	LS	1		
(v)	Supply, fixing of aluminium clamps for fixing of cable on Cable tray.	LS	1		
12	<u>Providing Earthing System with plate Earthing in accordance with BIS 3043 or latest amendment as per Technical Specification & Scope of Work.</u>				
(i)	Supply	No.	12		
(ii)	Installation, testing and commissioning	No.	12		

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

13	Supply and laying of 50 mm x 6 mm Hot dip galvanized Earthing flat / strip as per Technical specification & Scope of Work.				
(i)	Supply	Mtr	400		
(ii)	Laying by earth excavation or saddling on wall.	Mtr	400		
14	Supply of following electrical materials and accessories as per IER (Indian Electricity Rules):-				
(i)	11 KV grade rubber hand gloves	Pair	3		
(ii)	Rubber insulating mat as per IS:15652 for Class of insulating mat-B, Size 1Meter x 2Meter, colour-Black	Nos.	10		
(iii)	First aid box	Set	2		
(iv)	Shock treatment chart and safety rules mounted on acrylic sheet with suspension clamp and front clear plastic sheet lamination.	Set	2		
(v)	Fire extinguisher (Mech foam extinguisher-50Ltrs.each - 02Nos. and CO2(6.8Kg. each)-02Nos.) and Fire bucket 4 Nos. with pedestal stand	Set	1		
(vi)	5000V hand Operated Megger (Range-0-20000 Ohms.)	No.	2		
(vii)	Box spanner set (Make: TAPARIA) with complete accessories with box	Set	1		
				Total =	

Note: Bidders are not to quote here.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

BIDDING FORM-VII

Integrity Pact

Between

Kolkata Port Trust (SMP Kolkata) hereinafter referred to as “**The Principal/ Employer**”.

And

..... hereinafter referred to as “**The Bidder/Contractor**”

Preamble

The Principal intends to award, under laid down organizational procedures, contract/s for 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, an Independent External Monitor (IEM) appointed by the principal, will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings prior to, during and subsequent to the currency of the contract to be entered into with a view to:-

Enabling the PRINCIPAL/EMPLOYER to get the contractual work executed and/or to obtain/dispose the desired said stores/ equipment at a competitive price in conformity with the defined specifications/ scope of work by avoiding the high cost and the distortionary impact of corruption on such work /procurement/ disposal and Enabling BIDDERS/ CONTRACTORS to abstain from bribing or indulging in any corrupt practice in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing and other corrupt practices and the PRINCIPAL/EMPLOYER will commit to prevent corruption, in any form, by its officials by following transparent procedures.

Section 1 – Commitments of the Principal/ Employer.

- (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 prejudiced persons.
- (2). If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/Prevention of Corruption (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.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

Section-2 –Commitments of the Bidder(s) / Contractor(s)

- (1) The Bidder(s)/Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his 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 the 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 any 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 contract, 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 IPC/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 the Indian agent/representative have to be in Indian Rupees only. Copy of the "Guidelines on Indian Agents of Foreign Suppliers" is annexed and marked as Annex-A.
 - e. The Bidder(s)/Contractor(s) will when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (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 his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/Contractor(s) from the tender process or take action as considered appropriate.

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 Bid Security.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

- (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 Performance Bank Guarantee.

Section 5-Previous transgression

- (1) The Bidder declares that no previous transgressions occurred in the last 3 years from the date of signing the Integrity pact with any other Company in any country conforming to the anti corruption approach or with any other Public Sector Undertaking / Enterprise in India, Major Ports/ Govt. Departments of 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 considered appropriate.

Section 6- Equal treatment of all Bidders/Contractors/Sub-Contractors

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
- (2) The Principal, will enter into agreements with identical conditions as this one with all Bidders, Contractors and Sub-contractors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7- Other Legal actions against violating Bidder(s)/ Contractor(s)/ Sub Contractor(s)

The actions stipulated in this Integrity pact are without prejudice to any other legal action that may follow in accordance with provisions of the extant law in force relating to any civil or criminal proceedings. .

Section 8 – Role of Independent External Monitor (IEM):

- (a) The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this pact.
- (b) The Monitors shall not be subject to instructions by the representatives of the parties and shall perform their functions neutrally and independently.
- (c) Both the parties accept that the Monitors have the right to access all the documents relating to the contract.
- (d) As soon as the Monitor notices, or has reason to believe, a violation of this pact, he will so inform the authority designated by the Principal and the Chief Vigilance Officer of Kolkata Prot Trust.
- (e) The BIDDER/ CONTRACTOR(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the PRINCIPAL including that provided by the BIDDER/ CONTRACTOR. The BIDDER/ CONTRACTOR will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation, if any. The same is applicable to sub-contractors. The Monitor shall be under contractual obligation to treat the information and documents of the Bidder/Contractor/ Sub- contractor(s) with confidentiality.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

(f) The Principal/ Employer will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor, the option to participate in such meetings.

(g) The Monitor will submit a written report to the designated Authority of Principal/ Employer/ Chief Vigilance Officer of Kolkata Port Trust within 8 to 10 weeks from the date of reference or intimation to him by the Principal/ Employer/ Bidder/ Contractor and should the occasion arise, submit proposals for correcting problematic situation. BIDDER/ CONTRACTOR can approach the Independent External Monitor (s) appointed for the purposes of this Pact.

(h) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or to take corrective action, or to take other relevant 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.

(i) If the Monitor has reported to the Principal substantiated suspicion of an offence under the relevant IPC/PCA, and the Principal/ Employer has not, within reasonable time, taken visible action to proceed against such offence or reported to the Chief Vigilance Officer, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

(j) The word 'Monitor' would include both singular and plural.

Section 9 – Facilitation of Investigation:

In case of any allegation of violation of any provisions of this Pact or payment of commission, the PRINCIPAL/EMPLOYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER/CONTRACTORS and the BIDDER/CONTRACTOR shall provide necessary information and documents **in English** and shall extend all possible help for the purpose of such examination.

Section 10 – Pact Duration:

The pact beings with when both parties have legally signed it and will extend upto 2 years or the complete execution of the contract including warranty period whichever is later. In case bidder/contractor is unsuccessful this Integrity Pact shall expire after 6 months from the date of signing of the contract.

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 Chairman, SMP Kolkata.

Section 11 – Other Provisions:

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal in Kolkata.
- (2) Changes and supplements as well as termination notices need to be made in writing in English.
- (3) If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

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- (4) Should one or several provisions of this agreement turn out to be invalid, the reminder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

(For & on behalf of the Principal)

(For & on behalf of Bidder/Contractor).

(Office Seal)

(Office Seal)

Place :

Date :

Witness 1:

(Name & Address)

.....

.....

Witness 2:

(Name & Address)

.....

.....

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

GUIDELINES FOR INDIAN AGENTS OF FOREIGN SUPPLIERS

- 1.1 There shall be compulsory registration of Indian agents of Foreign suppliers for all Tenders. An agent who is not registered with SMP Kolkata shall apply for registration in the prescribed Application-Form.
- 1.2 Registered agents will file an authenticated Photostat copy (duly attested by a Notary Public)/Original certificate of the principal confirming the agency agreement and giving the status being enjoyed by the agent and the commission/ remuneration/salary/retainer ship being paid by the principal to the agent before the placement of order by SMP Kolkata.
- 1.3 Wherever the Indian representatives have communicated on behalf of their principals and the foreign parties have stated that they are not paying any commission to the Indian agents, and the Indian representative is working on the basis of salary or as retainer, a written declaration to this effect should be submitted by the party (i.e. Principal) before finalizing the order.

2.0 DISCLOSURE OF PARTICULARS OF AGENTS/REPRESENTATIVES IN INDIA. IF ANY.

- 2.1 Tenderers of Foreign nationality shall furnish the following details in their offer:
 - 2.1.1 The name and address of the agents/representatives in India, if any and the extent of authorization and authority given to commit the Principals. In case the agent/representative be a foreign Company, it is to be conformed whether it is real substantial Company and details of the same shall be furnished.
 - 2.1.2 The amount of commission/ remuneration included in the quoted price(s) for such agents/ representatives in India.
 - 2.1.3 Confirmation of the Tenderer that the commission/remuneration if any, payable to his agents/ representatives in India, is to be paid by SMP Kolkata in Indian Rupees only.

2.2 Tenderers of Indian Nationality shall furnish the following details in their offers:

- 2.2.1 The name and address of the foreign principals indicating their nationality as well as their status, i.e. whether manufacturer or agents of manufacturer holding the Letter of Authority of the Principal specifically authorizing the agent to make an offer in India in response to tender either directly or through the agents /representatives.
- 2.2.2 The amount of commission/remuneration included in the price(s) quoted by the Tenderer for himself.
- 2.2.3 Confirmation of the foreign principals of the Tenderer that the commission/remunerations, if any, reserved for the Tenderer in the quoted price(s), is to be paid by SMP Kolkata in India in equivalent Indian Rupees.
- 2.3 In either case, in the event of contract materializing, the terms of payment will provide for payment of the commission/remuneration, if any payable to the agents/representatives in India in Indian Rupees on expiry of 90 days after the discharge of the obligations under the contract.
- 2.4 Failure to furnish correct and detailed information as called for in paragraph-2.0 above will render the concerned tender liable for rejection or in the event of a contract materializing, the same liable to termination by SMP Kolkata. Besides this there would be a penalty of banning business dealings with SMP Kolkata or damage or payment of a named sum.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

SECTION -X



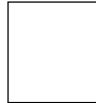
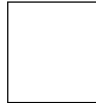


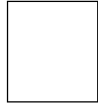

CHECKLIST

Before scanning and upload the following required documents, all pages are to be signed by a person duly authorised to sign on behalf of the bidder, and are to be embossed with their official seal, owing responsibility for their correctness / authenticity. All pages of the aforesaid documents should be serially marked.

*The offered prices would be given in the “**Price Bid**” electronically, through the website of **E-NIVIDA** only.*

Sl. No.	Particulars	Submitted/ Not submitted [Put √ if submitted and <u>put X if not submitted</u>]	If submitted, <u>page numbers</u>
1.	Filled up checklist.	<input type="checkbox"/>	<input type="checkbox"/>
2.	Proof of Bid Document Fee .	<input type="checkbox"/>	<input type="checkbox"/>
3.	Proof of Earnest Money Deposit (EMD) .	<input type="checkbox"/>	<input type="checkbox"/>
4.	Certificate of getting benefit by MSME / DCI / NSIC for exemption of Bid Document Fee .	<input type="checkbox"/>	<input type="checkbox"/>
5.	Bidding Forms		
	i) Bidding Form – I	<input type="checkbox"/>	<input type="checkbox"/>
	ii) Bidding Form - II	<input type="checkbox"/>	<input type="checkbox"/>

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	iii)	Bidding Form – III		
	iv)	Bidding Form - IV		
	v)	Bidding Form – V		
	vi)	Bidding Form - VI		

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

SECTION – XI

CONTRACT FORMS

FORM OF AGREEMENT

(To be submitted on Non- Stamp Paper of worth not less than INR 50.00)

CONTRACT NO. : GM(E)/..... /AGMT/...../.....

TENDER REFERENCE:

Tender No. SDM(P&E)/T/06/2023-24

“Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

”

”ORDER REFERENCE:..... / /O-... dated.....

This agreement made this day of ,Single thousand,
BETWEEN

The Board of Trustees for the Syama Prasad Mookerjee Port, Kolkata, a body corporate -- constituted by the Major Port Trust Act, 1963 (hereinafter called the ‘**Trustees**’, which expression shall unless excluded by or repugnant to the context be deemed to include their successors in office) of the one part

AND

..... (hereinafter called the ‘**Contractor**’, which expression shall unless excluded by or repugnant to the context be deemed to include its heirs, executors, administrators, representatives and assignees or successors in office) of the other part

[Together hereinafter the ‘**Parties**’]

WHEREAS

The Trustees are desirous that certain works should be executed by the Contractor, viz. ‘**Operation and Maintenance of mechanized Coal Handling Plant for handling of iron ore at Haldia Dock Complex**’ and have accepted a Bid / offer by the Contractor for execution, completion and maintenance of such works, including remedying any defects therein, during the Defect Liability Period.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this agreement words expressions shall

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this agreement words and expression shall have the same meanings as are respectively assigned to them in **Conditions of Contract** hereinafter referred to.
2. The following documents shall be deemed to form and be read and construed as part of this agreement :
 - a) The said bid /offer.
 - b) The Letter of Acceptance of the bid /offer [vide Order No...../...../...../O-...dated

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

- c) The Conditions of Contract and **Technical Specification** [all terms and conditions of Tender No. **SDM(P&E)/T/06/2023-24**
 - d) Addenda [Please insert Addenda Nos.....]
 - e) “Price Comparative Statement”, showing the prices quoted (electronically, through the website (<https://kopt.enivida.in>) by the Successful Bidder, in the Price Bid.
 - f) All correspondence, by which the contract is added, amended, varied or modified, in any way, by mutual consent.
3. In Consideration of the payments to be made by the Trustees to the Contractor as hereinafter mentioned, the Contractor hereby covenant with the Trustees to execute, complete & maintain the work, including remedy any defects therein (during the Defect Liability Period”), in conformity with the provisions of the Contract, in all respects.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed the day and year first before written.

The parties hereunto affixed their respective Common Seals (or have hereunto set their respective hands and seals).

For and on behalf of

For and on behalf of

HALDIA DOCK COMPLEX
KOLKATA PORT TRUST

(TRUSTEES)

SEAL

In presence of

In presence of

(CONTRACTOR)

SEAL

INDEMNITY BOND

[To be submitted on Non-judicial Stamp Paper of worth not less than INR 50.00, **duly notarized**]

Reference: Order No.:/...../...../O-... dated For “Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK”

**Senior Deputy Manager (P&E),
Haldia Dock Complex;
Operational Administrative Building (1st Floor);
Chiranjibpur, P.O.Haldia ;
Dist. Purba Medinipur ,
West Bengal, India
PIN : -721 604**

This deed of **Indemnity Bond** made on..... by
..... Having their office at
(hereinafter called “the **Contractor**”).

Whereas the General Manager (Engineering), **Haldia Dock Complex, SMP, Kolkata** , Dist.: Purba Medinipur, West Bengal (hereinafter call “the **Engineer**”) has placed an order, bearing no. /...../O-... dated And some materials, spare parts, components, sub-assemblies, etc. are required to be taken **outside of Haldia Dock Complex** premises for some specialized servicing, repairing, overhauling, etc. or **fault diagnosis & remedial measures** by the Contractor, as per the terms & conditions mentioned in the said order, and which have been mutually agreed upon by the parties hereto,

AND

Whereas in consideration of the said contract, the Contractor has agreed to execute an **Indemnity Bond** for the safe custody on receipt of the said materials, spare parts, components, sub-assemblies, etc., from the **Engineer** until the **completion of servicing / overhauling / repairing / remedial work** and returning back to the Engineer as hereinafter appearing.

Now this deed witnessed that in pursuance of the said agreement and in the premises, the Contractor agrees to indemnify Engineer and at all the terms, to hold themselves liable for all the **damages, loss** due to **pilferage / fire** or negligence on the part of the Contractor or their employees, agents and representatives or from whatever cause, with all losses, interest charges and expenses incurred by the said Engineer on account of the material(s) issued to the Contractor,

AND

It is in terms of the said contract and this **Deed of Indemnity**, the material(s) issued free to the Contractor for servicing / overhauling / repairing / **fault diagnosis & remedial work**, thereon shall be deemed to be the **property of the Engineer**.

It is hereby agreed that the Contractor shall be liable for all injury, losses and damages that may be caused to the, from whatever cause and further that the Contractor shall not part with or delivery possession of the said material(s) to any other party or person, save in compliance with and in performance & provision of contract in respect of which this **Indemnity Bond** is executed, the Contractor having undertaken to delivery the said material (s) in all respect in compliance with the terms of the contract.

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels
and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

This bond and the trust hereby created shall remain valid and binding on the Contractor till such time as the above said order has been fully and finally executed and Contractor has delivered the complete thereon to the Engineer under the terms of the contract.

For and on behalf of (name of the Contractor), under the common seal of the company.

WITNESS

(Signature of the authorised person on behalf of the Contractor)

(Signature)

Name :

Name :

Designation

Designation

Signed in my presence and identified by me

BANK GUARANTEE FOR PERFORMANCE GUARANTEE

[To be submitted on Non-judicial Stamp Paper of worth not less than INR 50.00]

To
The Board of Trustees,
Syama Prasad Mookerjee
Port, Kolkata.

BANK GUARANTEE NO.....DATE.....

Name of Issuing Bank.....

Name of Branch.....

Address.....

In consideration of the **Board of Trustees for the Syama Prasad Mookerjee Port, Kolkata**, a body corporate – duly constituted under the Major Port Trusts Act, 1963 (Act 38 of 1963), (hereinafter referred to as “**The Trustees**”) having awarded to Shri / Messrs

....., a Proprietary/ Partnership/Limited / Registered Company, having its Registered Office at

..... (hereinafter referred to as “The Contractor”, which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns), a CONTRACT by issue of Trustees’ Work Order No..... //...../O-..... dated For “Supply, Installation, Testing and Commissioning of 33KV Panel and 33/3.3KV, 6MVA transformer for Augmentation of Master control sub-station of HDC, SMPK” and the same having been unequivocally accepted by the Contractor resulting in a CONTRACT bearing No. GM (E)/ /AGMT/...../..... and the Contractor having agreed to provide a BANK GUARANTEE from a Nationalized / Scheduled Bank of India, in prescribed format for Rs.

..... (**Indian Rupees**) only, for the faithful and satisfactory performance of the entire contract.

We, ... Branch, Kolkata /Haldia, do, on the advice of the Contractor, hereby undertake to indemnify and keep indemnified the Trustees to the extent of the said sum of **Rs** (**Indian Rupees**) only. We, Branch, Kolkata /Haldia, further agree that if a written demand is made by the Trustees through any of its officials for honouring the Bank Guarantee constituted by these presents, we, Branch Kolkata /Haldia, shall have no right to decline to cash the same for any reason whatsoever and shall cash the same and pay the sum so demanded to the Trustees within a week from the date of such demand by an A/c Payee Banker’s Cheque drawn in favour of “Kolkata Port Trust”, without any demur. Even if there be any dispute between the Contractor and the Trustees, this would be no ground for us, (Name of Bank), Branch, Kolkata /Haldia, to

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

decline to honour the Bank Guarantee in the manner aforesaid. The very fact that we,Branch, Kolkata...../Haldia, decline or fail or neglect to honour the Bank Guarantee in the manner aforesaid, shall constitute sufficient reason for the Trustees to enforce the Bank Guarantee unconditionally without any reference, whatsoever, to the Contractor.

2. We,Branch, Kolkata...../Haldia, further agree that a mere demand by the Trustees at anytime and in the manner aforesaid, is sufficient for us,Branch, Kolkata/Haldia, to pay the amount covered by this Bank Guarantee in full and in the manner aforesaid and within the time aforesaid without reference to the Contractor and no protest by the Contractor, made either directly or indirectly or through court, can be valid ground for us,Branch, Kolkata/Haldia, to decline or fail or neglect to make payment to the Trustees in the manner and within the time aforesaid.
3. We,Branch, Kolkata/Haldia, further agree that the Bank Guarantee herein contained shall remain in full force and effect, during the period that is taken for the due performance of the said contract by the Contractor and that it shall continue to be enforceable till all the dues of the Trustees under and/or by virtue of the terms and conditions of the said contract, have been fully paid and its claim satisfied and/or discharged in full and/or till the Trustees certify that the terms and conditions of the said contract have been fully and properly observed/fulfilled by the Contractor and accordingly, the Trustees have discharged the Bank Guarantee, subject however, that this guarantee shall remain valid upto and inclusive ofday of.....and subject all so that the provision that the Trustees shall have no right to demand payment against this guarantee after the expiry of 6 (six) calendar months from the expiry of the afore said validity period upto or any extension thereof made by us,Branch, Kolkata/Haldia, in further extending the said validity period of this Bank Guarantee on Non-judicial Stamp Paper of appropriate value, as required / determined by the Trustees, only on a written request by the Trustees to the Contractor for such extension of validity of this Bank Guarantee.
4. We,Branch, Kolkata/Haldia, further agree that, without our consent and without affecting in any manner our obligations hereunder, the Trustees shall have the fullest liberty to vary from time to time any of the terms and conditions of the said contract or to extend the time for full performance of the said contract including fulfilling all obligations under the said contract by the Contractor or to postpone for any time or from time to time any of the powers exercisable by the Trustees against the Contractor and to forebear or enforce any of terms and conditions relating to the said contract and We,Branch, Kolkata/Haldia, shall not be relieved from our liability by reason of any such variation or extension being granted to the Contractor or for any fore- bearing, act or commission on the part of the Trustees or any indulgence by the Trustees to the Contractor or by any such matter or thing of whatsoever nature, which under the law relating to sureties would, but for this provision, have effect of relieving us,Branch, Kolkata/Haldia.

5. We, Branch, Kolkata /Haldia do also agree that the Trustees at their option shall be entitled to enforce this Guarantee against us
 Branch, Kolkata /Haldia as principal debtor in the first instance without producing against the Contractor and notwithstanding any security or other guarantee that the Trustees may have in relation to the Contractor's liabilities.
6. We, - Branch, Kolkata. /Haldia, lastly undertake not to revoke this Bank Guarantee during its currency except with the previous consent of the Trustees in writing.

SIGNATURE... ..

NAME.....

DESIGNATION.....

(Duly constituted attorney for and on behalf of)

BANK.,

BRANCH... ..

KOLKATA /HALDIA

(OFFICIAL SEAL OF THE BANK)

Bid Security Declaration Format

Tender No.: SDM(P&E)/T/06/2023-24

for

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

To,
**General Manager (Engineering),
Haldia Dock Complex,
Syama Prasad Mookerjee Port, Kolkata**

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 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)

Name: (insert complete name of person signing the Bid Securing Declaration)

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

Corporate Seal:

Syama Prasad Mookerjee Port, Kolkata
Haldia Dock Complex

CERTIFICATE OF COMPLETION OF
WORK (FORM G.C-1)

Contractor : _____

Address : _____

Date of completion : _____

Dear Sir,

Subject: “Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.”.

Reference : i) **Work Order No.:**/...../...../O-... dated
ii) **ContractNo./AgreementNo.:**...../...../...../AGMT/
...../

This is to certify that the above work which was carried out by you is, in the opinion of the undersigned, complete in every respect on the _____ day of _____ 20____, in accordance with terms of the contract and you are required to maintain the work in accordance with **Clause No. 62** of the General Conditions of Contract and under provisions of the contract.

(Signature of the Engineer/Engineer's Representative)

Name:

Designation:

Date:

(OFFICIAL SEAL)

Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels
and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.

**Syama Prasad Mookerjee Port, Kolkata
Haldia Dock Complex**

**CERTIFICATE OF FINAL
COMPLETION FORM G.C-2**

**General Manager (Finance),
Haldia Dock Complex (HDC),
Syama Prasad Mookerjee Port,
Kolkata Jawahar Tower Complex,
P.O: Haldia Township,
Dist.: Purba Medinipur,
PIN – 721 607,
West Bengal, India.**

Subject: “Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK.”

Reference: i) **Work Order No.:**/...../...../O-...
dated.....

ii) **Contract No./ Agreement No. :**/...../...../AGMT/...../

This is to certify that the above work, which was carried out by.....is now complete in every respect, in accordance with the terms of the contract and that all obligations under the contract have been fulfilled by the Contractor.

(Signature of the Engineer/Engineer's

Representative) Name:

.....

Designation:

Date:

(OFFICIAL SEAL)

Syama Prasad Mookerjee Port, Kolkata
Haldia Dock Complex
("NO CLAIM CERTIFICATE" FROM CONTRACTOR)

FORM G.C-3

[To be submitted on Bidder's Letter Head]

General Manager (Finance),

Haldia Dock Complex (HDC),

Syama Prasad Mookerjee Port, Kolkata Jawahar Tower Complex, P.O:

Haldia Township, Dist.: Purba Medinipur, PIN – 721 607, West

Bengal, India.

Dear Sir,

Subject: "Supply, Delivery, Installation, Testing and Commissioning of 33 kV/3.3 kV, 6MVA Transformers, 33 kV Panels and allied works for augmentation of Master control sub-station at Coal Handling Plant of HDC, SMPK."

Reference: i) **Work Order No.:**/...../...../O-dated.....

ii) **Contract No./ Agreement No.:**/...../...../AGMT/...../

I/We do hereby declare that I/we have received full and final payment from Haldia Dock Complex, SMP Kolkata, for the execution of the subject work, and I/we have no further claim against Haldia Dock Complex, Syama Prasad Mookerjee Port, Kolkata in respect of the above mentioned job.

Yours faithfully,

(Signature of Contractor)

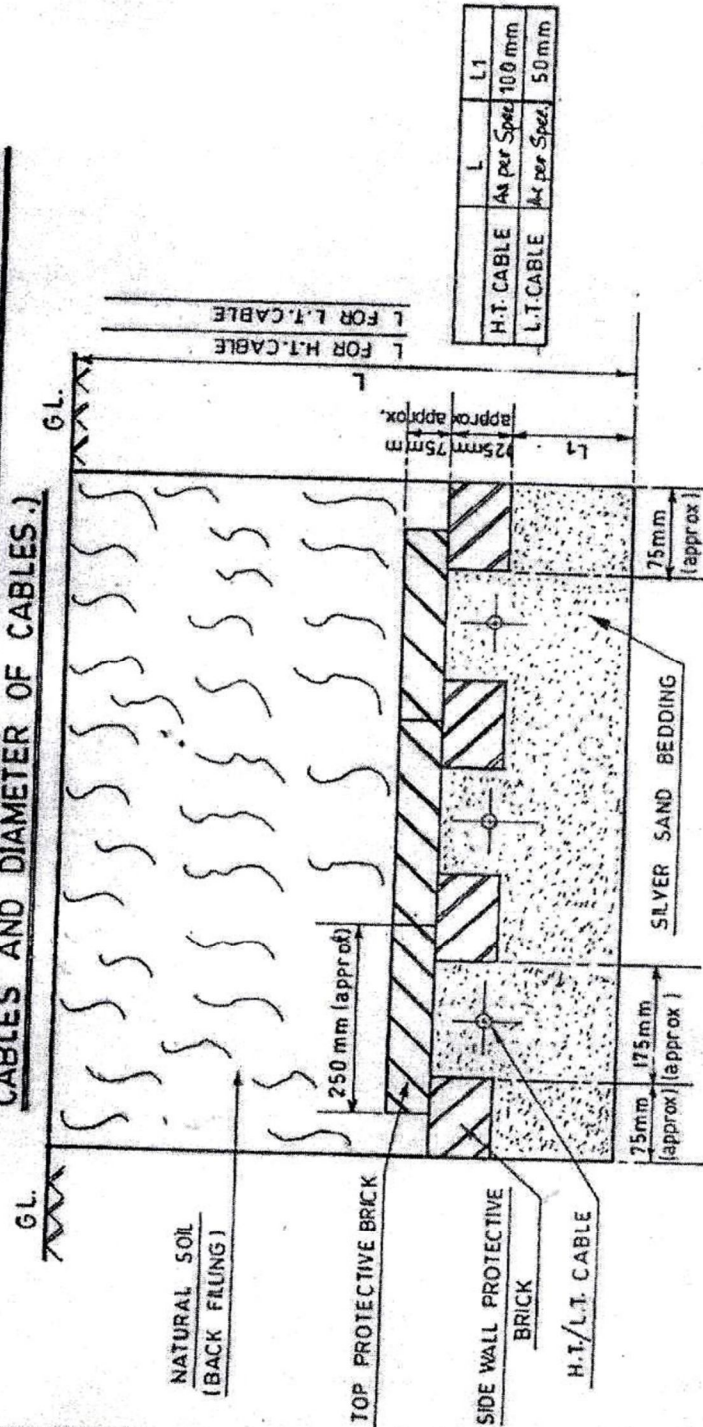
Date :

Name of Contractor :

Address :

(OFFICIAL SEAL OF THE CONTRACTOR)

SINGLE/MULTI NUMBERS H.T./L.T. CABLES IN ONE TRENCH.
(WIDTH OF THE TRENCH OF THE CABLE WILL DEPEND ON THE NO. OF CABLES AND DIAMETER OF CABLES.)



CABLE TRENCH

KOLKATA PORT TRUST		NAME	DT
HALDIA DOCK COMPLEX		DGN.	
M(P & E)'S DRG. OFFICE		DRN.	Handwritten: 30-08-10
SINGLE/MULTI NUMBERS H.T./L.T.		TCD.	
CABLES IN ONE TRENCH.		CKD.	
SCALE: 1:100		APVD.	
DRG. NO. SK-334			