

**HALDIA DOCK COMPLEX  
KOLKATA PORT TRUST**



**ENGINEERING DEPARTMENT INVITES E-TENDER**

**[Tender No. SDM (P&E)/T/46/2019-20]**

**FOR**

**Maintenance of mechanized Coal Handling plant of  
Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.**

**July- 2019**

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KOLKATA PORT TRUST  
**HALDIA DOCK COMPLEX**

**SECTION-I**  
**SHORT E-TENDER NOTICE**

**Tender No. : SDM (P&E)/T/46/2019-20**

**E-Tender No.: KoPT/Haldia Dock Complex/P&E Div/9/19-20/ET/28**

Online e-tenders are invited for the work of **“Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.”**

Estimated Cost: **624.563 Lakhs**

Date of Pre-Bid meeting: **16.07.2019**, 11:00 Hrs. onwards.

Closing date & time of online submission of e-tender: **01.08.2019**, up to 14:00 Hrs.

For details of tender and any corrigendum / addendum, please visit MSTC's e-portal <http://www.mstcecommerce.com/eprochome/kopt>.

**General Manager (Engineering)**  
**Haldia Dock Complex**  
Kolkata Port Trust

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

KOLKATA PORT TRUST  
HALDIA DOCK COMPLEX  
**NOTICE INVITING E-TENDER**

(Tender No. SDM (P&E)/T/46/2019-20)

E-Tender No.: KoPT/Haldia Dock Complex/P&E Div/9/19-20/ET/28

**E-Tenders**, 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), Kolkata Port Trust (KoPT), from the intending bidders, fulfilling the “**Minimum Eligibility Criteria (MEC)**” and complying with the “**Test of responsiveness**” for the work of “**Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.**”

**2.1 MINIMUM ELIGIBILITY CRITERIA (MEC):**

**2.1.1** The average annual financial turnover of the bidder, during the last three (3) years, ending 31<sup>st</sup> March, 2018, must be at least ₹187.368 Lakhs. Auditor’s Report of the bidding firm, certified by Chartered Accountant (CA), for the years 2015-16, 2016-17 and 2017-18, including relevant Audited Balance Sheets and Profit & Loss Accounts, should be made available.

**Note:** The bidder must upload the scanned copies of Annual Financial Turnover Statement (certified by CA) for the years 2015-16, 2016-17 and 2017-18 along with Balance Sheets and Profit & Loss Accounts.

**2.1.2** The bidder must have experience of having successfully completed “**Similar Work**” [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 of contract value not less than ₹ 249.825 Lakhs each.

Or

b) Two similar completed works of contract value not less than ₹ 312.281 Lakhs each.

Or

c) One similar completed work of contract value not less than ₹ 499.650 Lakhs each

The term “*similar work*” means -

***“Maintenance of mechanised dry bulk handling plant of minimum capacity of Two Million Metric Tonnes per annum (2 MMTPA).”***

OR

***“Installation, testing & commissioning of material handling equipment viz. loader, unloader/stacker/ reclaimers/ electric level luffing cranes/RMQC/ tippler in steel plants/ refineries/ port sectors/ power sectors/ cement industries.”***

**Note:** The bidder will have to upload the scanned copies of work order(s) for similar

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

works, successful completion certificates (with performance) from clients indicating the date of completion, value of work done, etc..

## 2.2

### (i) TEST OF RESPONSIVENESS:

The bidder should be considered responsive, only if scanned copy of the required document shall be uploaded along with bids;

- a) The bidder will have to upload the scanned copies of work order(s) for similar works and successful completion certificates (with performance) from clients indicating the date of completion, value of work done, etc.
- b) The bidder must upload the scanned copies of Annual Financial Turnover Statement (certified by CA) for the years 2015-16, 2016-17 and 2017-18 along with Balance Sheets and Profit & Loss Accounts.
- c) The bidder must deposit EMD online, if applicable, and upload the scanned documentary evidence of the transaction. The EMD may be submitted in the form of Bank Guarantee in the enclosed format. However, in case of submission of EMD through Bank guarantee the intending bidder should follow the instruction indicated in the enclosed procedure.

### (ii) OTHER DOCUMENTS:

- a) 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.
- b) 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.
- c) Registration certificate of **Employees' State Insurance (ESI)** authority, if applicable.  
  
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 **Kolkata Port Trust** against all damages & accident occurring to their labourer (including that of sub-contractor's labourers), in connection with the instant contract, in case they become a Successful Bidder.
- d) PAN Card, issued by Income Tax Department, Government of India.
- e) **Certificate of Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC)** to get benefit in this regard, please refer clause 4.3
- f) The bidder shall upload the scanned copy of **Power of Attorney, if applicable**.

- g) Goods and Services Tax (GST) Registration Certificate, issued by Government of India.
- h) In case of association, in the form of a Licensing Agreement or a Technical Collaboration & Operational Agreement or a Joint Venture Agreement or a Consortium with other bidder(s), the members of the association should nominate one of the members as “Lead Partner” for participating in the bid and for signing all the documents related therewith, up to signing of Contract Agreement and execution thereafter (in case of award of contract). All the members of the association must also be jointly and severally responsible for satisfactory performance of the contract (in case of award of contract). Agreements (in line with ITB Clause No. 5.3.5) amongst the “Lead Partner” and other members of the association are to be submitted [uploaded] by the bidder in the “Pre-qualification & Techno-commercial Bid”.

The experience of each member of Licensing Agreement or Technical Collaboration & operational Agreement or Joint Venture Agreement or Consortium would be considered at par with other eligible bidders, subject to the condition that the collective experience of the members, comprising the Licensing Agreement or Technical Collaboration Agreement or Joint Venture Agreement or Consortium, must meet the criteria established in the MEC, as detailed in Clause Nos. 2.1.

- 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 is not submitted by the bidder. Essential documents means papers related to “Minimum Eligibility Criteria (MEC)”, “Test of responsiveness”, including Bid Document fee, Earnest Money Deposit and Power of Attorney.

**2.4 AVAILABILITY OF THE BIDDING DOCUMENTS:**

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

- <http://www.mstcecommerce.com/eprhome/kopt> of MSTC Ltd.
- <http://eprocure.gov.in/epublish/app> of Central Public Procurement Portal.
- <http://www.kolkataporttrust.gov.in> of 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 MSTC Ltd. (<http://www.mstcecommerce.com/>) only.*

**General Manager (Engineering)**  
**Haldia Dock Complex**  
Kolkata Port Trust

### **SECTION-III**

#### **SCHEDULE OF TENDER (SOT)**

**(Tender No. SDM (P&E)/T/46/2019-20)**

**E-Tender No.: KoPT/Haldia Dock Complex/P&E Div/9/19-20/ET/28**

<b>3.1.</b>	<b>Name of work</b>	::	“Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.”
<b>3.2.</b>	<b>Tender Inviting Authority</b>	::	<b>General Manager (Engg.)</b> Haldia Dock Complex ; Kolkata Port Trust.
<b>3.3.</b>	<b>Mode of Tender</b>	::	<b>e-Procurement System</b> Online ( <b>Part I: Pre-qualification &amp; Techno-commercial Bid and Part II: Price Bid</b> ) through <a href="http://www.mstcecommerce.com/eprochome/kopt">http://www.mstcecommerce.com/eprochome/kopt</a> . of <b>MSTC Ltd.</b> <i>No physical tender is acceptable by Haldia Dock Complex, Kolkata Port Trust.</i>
<b>3.4.</b>	<b>Estimated Cost</b>	::	<b>₹624.563 Lakhs (excluding GST).</b>
<b>3.5.</b>	<b>i) Transaction Fee</b>	::	The intending bidders must deposit <b>₹ 17,700 only</b> [Including GST @18%] as “ <b>Transaction Fee</b> ” ( <b>non-refundable</b> ), in favour of <b>MSTC LIMITED</b> by <b>NEFT</b> or <b>Online Payment</b> . The intending bidders will be activated for bid submission only after receipt of aforesaid “ <b>Transaction Fee</b> ” by <b>MSTC LIMITED</b> . The intending bidders are advised to remit the “Transaction Fee” well in advance before the closing time of the event, so as to give themselves sufficient time to submit the bid.
	<b>ii) Bid Document Fee (Cost of bidding documents)</b>	::	The intending bidders must deposit <b>₹ 2,950 (Indian Rupees: Two thousand nine hundred fifty) only [including GST @ 18%]</b> , as <b>Bid Document Fee (non-refundable)</b> , to Haldia Dock Complex, along with their offer. In case the said <b>Bid Document Fee</b> is not deposited by the bidder, the respective bid will be summarily rejected, treating the same as non-responsive.
	<b>iii) Earnest Money Deposit (EMD)</b>	::	The intending bidders must deposit <b>₹12.49126 Lakhs (Indian Rupees: Twelve lakhs forty nine thousand one hundred and twenty six only )</b> only, as <b>Earnest Money</b> , to Haldia Dock Complex, along with their

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

		offer. In case the said <b>Earnest Money</b> is not deposited by the bidder, the respective bid will be summarily rejected, treating the same as non-responsive.
		<p>NOTE ::</p> <p>(i) For exemption of Bid Document Fee and EMD to upload the scanned copy of the certificate from National Small Industries Corporation (NSIC) with DIC is required.</p> <p>(ii) The bidders, who are not registered with MSTC, are advised to get themselves registered with MSTC, at least 72 (seventy-two) hours prior to making payment of Bid Document Fee and Earnest Money.</p> <p>(iii) The bidders are advised to deposit Bid Document Fee and EMD using the <b><u>Axis Bank Payment Gateway only</u></b>. (No other method of payment of Bid Document Fee shall be accepted.) OR</p> <p>(iv) Earnest Money Deposit (EMD) may also be deposited in the form of an irrevocable and unconditional <b>Bank Guarantee</b> [as per the form added in <b>Section-XIII</b>], from any Kolkata/Haldia Branch of a Nationalized/Scheduled Bank of India. In such case an amount of Rs. 10.00 lakhs (Ten Lakhs) to be deposited through Axis Bank gateway and the balance amount of EMD may be submitted in the form of BG. The Bank guarantee in original must physically reach the office of the Engineer of the Contract before the opening of the Techno-commercial bid. In case of foreign Bank Guarantee, it shall be routed through any Branch of corresponding Nationalized/Scheduled Bank in India and such corresponding Bank shall confirm the same and standby for all the commitments under the Bank Guarantee. In all cases, any dispute regarding Bank Guarantee will be adjudicated under the jurisdiction of The Calcutta High Court.</p> <p>Earnest Money Bank Guarantee (EMBG) submitted by bidders shall be denominated in the respective currency (ies) mentioned in the instant clause and for the respective amounts.</p> <p>The EMBG should be kept valid and enforceable till a date, covering <b>at least 3 (three) months</b> beyond the date of expiry of the validity period of the bid.</p> <p>In case a bidder agrees to any extension of the bid validity period, asked by KoPT, the validity of the corresponding EMBG shall have to be extended till a date, covering at least 3 (three) months beyond the date of expiry of such extended bid validity period.</p> <p>Scanned copy of such EMBG must be submitted (uploaded) by the bidders, along with the Pre-qualification</p>

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			<p>&amp; Techno-commercial Bid.</p> <p>The <b>original Bank Guarantee</b> should be sent by the <b>issuing Branch of the Bank, directly to the Employer</b>, at the following address:</p> <p><b>Senior Deputy Manager (Finance), Haldia Dock Complex (HDC), Jawahar Tower Complex, P.O: Haldia Township, Dist.: Purba Medinipur, PIN – 721 607, West Bengal, India.</b></p> <p>The <b>original Bank Guarantee</b> should reach the above address before the closing date and time of submission of bid.</p> <p>Details of Earnest Money remitted must be entered by the participating bidder in the space provided in the e-Tender, as indicated hereunder:</p> <p>a) Name of the bidder: b) E-Tender No.: KoPT/Haldia Dock Complex/P&amp;E Div/9/19-20/ET/28 c) Amount of EMBG: d) EMBG Bank details: e) <b>Bank Guarantee No.:</b> f) Date of EMBG:</p>
<b>3.6.</b>	<b>Work Period</b>	::	24 months with a provision for extension for a further period of 12 months.
<b>3.7.</b>	<b>Bid Validity</b>	::	180 days.
<b>3.8.</b>	<b>Security Deposit</b>	::	10 % of the work Value excluding GST in the form of Bank Guarantee.
<b>3.9.</b>	<b>Date, time and venue of Pre-Bid Meeting (off-line).</b>	::	<p><b>16.07.2019 at 11:00 Hrs (IST).</b></p> <p><b><u>Address:</u></b> Engineering Department Jawahar Tower Complex ; P.O.: Haldia Township; Dist.: Purba Medinipur ; PIN: –721607 West Bengal, India. <b>Telephone no. : + 91-3224-263255</b> <b>E. mail : aganesan.hdc@nic.in</b></p>
<b>3.10.</b>	i) <b>Starting date &amp; time of submission of e-Tender at <a href="http://www.mstcecommerce.com/eprochome/kopt">http://www.mstcecommerce.com/eprochome/kopt</a></b>	::	<b>25.07.2019 from 14.00 hr.</b>

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	ii) Closing date & time of submission of e-Tender at <a href="http://www.mstcecommerce.com/eprochome/kopt">http://www.mstcecommerce.com/eprochome/kopt</a>	::	<b>01.08.2019, up to 14: 00 Hrs. (IST).</b>
	iii) Date & time of opening of Part-I (Techno-commercial Bid)	::	<b>01.08.2019, 14: 30 Hrs. (IST) onwards.</b>
	iv) Date & time of opening of Part-II (Price Bid)	::	<b>Shall be informed separately.</b>
<b>3.11.</b>	<b>Address of the Employer</b>	::	<b>Kolkata Port Trust (KoPT).</b> 15 Strand Road, Kolkata – 700 001, West Bengal, India.
<b>3.12.</b>	<b>Address of Engineer</b>	::	<b>General Manager (Engineering)</b> Haldia Dock Complex ; Kolkata Port Trust.  <b><u>Address:</u></b> Engineering Department Jawahar Tower Complex ; P.O.: Haldia Township; Dist.: Purba Medinipur ; PIN: –721607 West Bengal, India. <b>Telephone no. : + 91-3224-263255</b> <b>E. mail : aganesan.hdc@nic.in</b>
<b>3.13.</b>	<b>Address of the Engineer's representative</b>	::	Shri S. Chakraborty, Sr. Dy. Manager (P&E), Haldia Dock Complex, Operational Administrative Building (1 <sup>st</sup> floor), Chiranjibpur; P.O: Haldia; Dist.: Purba Medinipur; PIN: 721 604; West Bengal; India.  Phone no. + 91 9434735407 Landline: + 91-3224-252662 <b>E. mail : schakraborty.hdc@nic.in</b>

**General Manager (Engineering)**  
Haldia Dock Complex  
Kolkata Port Trust

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

## **SECTION - IV**

### **INSTRUCTIONS FOR ONLINE BID SUBMISSION**

#### **4.1 Introduction:**

- 4.1.1** This is an e-procurement event of **HALDIA DOCK COMPLEX**. The e-procurement service provider is **MSTC Ltd.**, 225C, A.J.C. Bose Road, Kolkata-700 020.
- 4.1.2** The intending bidders are requested to go through the “**Instructions To Bidders (ITB)**” and contents of this bidding document, including all terms & conditions and Technical Specifications before submitting online tender. Bidders who do not comply with the requirements / conditions, with documentary proof (wherever required), will not qualify in the tender, for opening of Price Bid.
- 4.1.3** **SPECIAL NOTE:**  
**THE PRE-QUALIFICATION & TECHNO-COMMERCIAL BID AND PRICE BID SHALL HAVE TO BE SUBMITTED ON-LINE AT [www.mstcecommerce.com/eprochome/kopt](http://www.mstcecommerce.com/eprochome/kopt) only.**
- 4.1.4** Possession of valid Digital Signature Certificate (DSC) [Class III Signing Type] and Registration of the intending bidder with **MSTC Limited** on the e-Procurement / e-Tender Portal of MSTC are pre-requisites for the instant e-Tendering.
- 4.1.5** The Digital Signature Certificate (DSC) [Class III Signing Type], issued by nCode/eMudra or any Certifying Authority (CA) recognized by Controller of Certifying Authorities (CCA), India, should be registered. Only the DSC that is registered should be used by the bidder and the bidder should ensure safety of the same.
- 4.1.6** The intending bidders are requested to read the vendor guide and see the video in the webpage [www.mstcecommerce.com/eprochome](http://www.mstcecommerce.com/eprochome) to familiarize themselves with the system before bidding.
- 4.1.7** The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website [www.mstcecommerce.com/eprochome/](http://www.mstcecommerce.com/eprochome/) of **MSTC Limited**.
- 4.1.8** All entries in the tender should be entered in online Technical & Commercial formats, without any ambiguity.
- 4.1.9** The e-Tender platform shall remain open from the pre-announced date & time and for as much duration as mentioned in the Schedule of Tender (SOT).
- 4.1.10** E-tender cannot be accessed after the closing date and time of e-Tender, mentioned in the Schedule of Tender (SoT) of the instant bidding documents.

#### **4.2 Process of e-tender :**

##### **4.2.1 Registration:**

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

The process involves **vendor's registration with MSTC e-procurement portal** which is **free of cost**. Only after registration, the vendor(s) can submit his / their bids electronically. Electronic bidding for submission of Techno-Commercial Bid as well as Price Bid will be done over the internet. The **Vendor should possess Class III Signing type Digital Certificate**. Vendors are to make their own arrangement for bidding from a Personal Computer / Laptop, connected with Internet. **MSTC** is not responsible for making such arrangement. (*Bids will not be recorded without Digital Signature*).

#### **4.2.2 Steps for Registration:**

- i) Vendors are required to register themselves online with [www.mstcecommerce.com](http://www.mstcecommerce.com) → e-Procurement → PSUs / Govt. Departments → Kolkata Port Trust → Register as Vendor → (Filling up required details and creating own user id & password) → Submit.
- ii) Vendors will receive system generated mail(s), confirming their registration, in their e-mail ID(s), which has been provided during filling up the registration form.

#### **4.2.3 The intending bidders are requested to submit their bids, keeping sufficient time in hand.**

#### **4.2.4 In case of any clarification regarding online submission of bids, the intending bidders are requested to contact HDC / MSTC, well in advance, keeping sufficient time in hand.**

##### **Contact person (Haldia Dock Complex):**

- (i) **Mr. A. Ganesan**  
General Manager (Engineering)  
Haldia Dock Complex ;  
Kolkata Port Trust.  
**Telephone no. :** + 91-3224-263255  
**E. mail :** [aganesan.hdc@nic.in](mailto:aganesan.hdc@nic.in)
- (ii) Mr. S. Chakrabarty  
Sr. Dy. Manager (P&E.) ,HDC  
Phone no. + 91 9434735407  
Landline: + 91-3224-252543  
email - [schakraborty.hdc@nic.in](mailto:schakraborty.hdc@nic.in)

##### **Contact persons (MSTC Ltd.):**

- |   |  |
|---|--|
| (i) Mr. V. K. Jaiswal<br>Regional Manager (ERO)<br>Mobile No: +919903042449<br>Email- <a href="mailto:vikash@mstcindia.co.in">vikash@mstcindia.co.in</a>                                | (iii) Mr. M. H. Jain<br>Asstt.Manager (ERO)<br>Mobile No: +919721277969<br>Email- <a href="mailto:mhjain@mstcindia.co.in">mhjain@mstcindia.co.in</a> |
| (ii) Mr. P. Biswas<br>Asstt.Manager (ERO)<br>Mobile No.- +919903248755<br>Email: <a href="mailto:pbiswas@mstcindia.co.in">pbiswas@mstcindia.co.in</a><br>Landline: +91 – 33 – 2290 1004 |  |

#### **4.2.5 System requirements and other requirements:**

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

- i) Operating System: Windows 7 or above.
- ii) Internet Browser: IE-7 or above.
- iii) Class-III Signing Type Digital Certificate.
- iv) Latest update JRE 8 (x86 Offline) Software to be downloaded and installed in the system.
- v) To disable “Protected Mode” for DSC (Digital Signature Certificate) to appear in the signer box, the following setting may be applied:  
     Tools => Internet Options => Security => Disable Protected Mode (if enabled), i.e., remove the tick from the tick box mentioning “Enable Protected Mode”.
- vi) Other settings:  
     Tools => Internet Options => General => Click on Settings under “Browsing History/Delete Browsing History” => Temporary Internet Files => Activate “Every time I visit the webpage”.
- vii) To enable ALL Active X controls and disable ‘use pop up blocker’ under Tools → Internet Options → Custom Level (Please run IE settings from the webpage [www.mstcecommerce.com](http://www.mstcecommerce.com) once).

#### 4.2.6 **Bidding in e-tender:**

- i) The intending bidders need to submit necessary Transaction Fee, to become eligible to bid online in the e-Tender. Transaction Fee is non-refundable.  
     Bid Document Fee is non-refundable. Earnest Money Deposit will be refunded to the unsuccessful bidders, without any interest, within 2 (two) months from the date of opening of Price Bids or on finalization/ acceptance of tender, whichever is earlier. Earnest Money Deposit of the successful bidder will be refunded, without any interest, after submission of Security Deposit by them.
- ii) The bidders must upload all the documents required as per the instant bidding documents (including Notice Inviting e-Tender). Any other document uploaded, which is not required as per the instant bidding documents (including Notice Inviting e-Tender), shall not be considered.
- iii) **Certificate of MSME / Micro & Small Enterprises (MSEs) / DIC / SSI / National Small Industries Corporation (NSIC)** shall have to be submitted (uploaded) to get benefit.
- iv) Unit of Measure (UOM) is indicated in the e-Tender platform. Rate to be quoted should be in Indian Rupees, as per UOM indicated in the e-Tender platform or in the bidding documents.
- v) **Steps for submitting Pre-Qualification & Techno-Commercial Bid and Price Bid :**  
     The intending bidder(s), who have submitted the required Transaction Fee, can only submit their Pre-qualification & Techno-commercial Bid and Price Bid, through Internet, in MSTC website. The steps are given hereunder:

- a) [www.mstcecommerce.com](http://www.mstcecommerce.com) → e-Procurement → PSUs/Govt. Departments → Kolkata Port Trust → Login → My Menu → Auction Floor Manager → Live Event → Selection of the Live Event → Techno-commercial Bid
- b) The bidder should allow running JAVA application. This exercise has to be done immediately after opening of Bid Floor. Then the necessary steps, as would appear, would have to be followed. If this application is not run, then the bidder will not be able to save/submit their bid.
- c) After filling the Techno-commercial Bid, the bidder should click on “Save” for recording their Techno-commercial Bid. Once the same is done, the Price Bid link becomes active and the same has to be filled up and then the bidder should click on “Save” to record their Price Bid. Then once both the Techno-commercial Bid and Price Bid have been saved, the bidder can click on the “Final submission” button to register their bid.
- vi) The bidders should quote their offered prices appropriately, only in the aforesaid Price Bid link. Price indicated anywhere else, in any other form or manner, will not be considered for evaluation of Price Bid.
- vii) The Techno-commercial Bid and Price Bid cannot be modified/revised, once the “Final submission” button has been clicked by the bidder.
- viii) After submitting online bid, the bidder cannot access the bid submitted by him/them, once the “Final submission” button has been clicked by the bidder.

#### **4.2.7 Special Note towards Transaction Fee:**

The intending bidder shall pay the Transaction Fee using “Transaction Fee Payment” link under “My Menu” in the vendor login. The intending bidder has to select the particular tender from the event dropdown box. The intending bidder shall have the facility of making the payment either through NEFT or Online Payment. On selecting NEFT, the intending bidder shall generate a challan by filling up a form. The intending bidder shall remit the Transaction Fee amount as per the details printed on the challan, without making change in the same. On selecting Online Payment, the intending bidder shall have the provision of making payment using its Credit Card/Debit Card/Net Banking. Once the payment gets credited to MSTC’s designated Bank account, the Transaction Fee shall be auto authorized and the intending bidder shall be receiving a system generated mail.

**Transaction Fee is non-refundable.**

An intending bidder will not have access to online e-Tender without making payment towards Transaction Fee. In other words, an intending bidder will be activated for bid submission, only after receipt of the Transaction Fee by MSTC Limited.

NOTE: The intending bidders are advised to remit the “Transaction Fee” well in advance before the closing time of the event, so as to give themselves sufficient time to submit the bid.

#### **4.2.8 Procedure of payment of Earnest Money and Bid Document Fee through Axis Bank Gateway :**

- i) The bidder would be able to access the payment gateway from the Vendor login page of the MSTC ecommerce site ([www.mstcecommerce.com](http://www.mstcecommerce.com) → e-Procurement → PSU/Govt. depts. → Kolkata Port Trust) under the icon “HDC EMD/Tender

Fee Payment”. Clicking this icon will take the bidders to the Axis Bank Gateway.

Alternatively, the bidder can also access the gateway by from Axis Bank Easy Pay website (<https://easypay.axisbank.co.in> → Others → Haldia Dock Complex).

- ii) The bidder will be required to mention the bidder’s ID (the ID used by the bidder for logging in the MSTC website) and Bid ID (E-Tender No. of the tender against which the bidder intends to submit bid) and then click ‘VALIDATE’.
- iii) A webpage will populate, where the bidder will be required to select “Earnest Money” OR “Bid Document Fee”, then indicate his Mobile Number and the CAPTCHA displayed in the webpage.
- iv) Depending on the selection, another webpage will come up.
- v) In case of selection of Earnest Money (EM), the bidder will be required to select the option of With or Without Bank Guarantee. In case of the instant tender, where there is no option to pay the EM through Bank Guarantee (BG), the bidders should select the option ‘Without’.
- vi) The bidder will be required to mention their Bank Account Number, IFSC of their Bank and the name of the account, insert the CAPTCHA mentioned in the webpage and then ‘SUBMIT’. In case of Bid Document Fee payment, Bank Account Number would not be required.

An URN Number will be generated. Bidders should keep note of this URN Number for all future reference.

- vii) Another webpage will come up and the bidder will have the option to select payment methods from – (i) Internet Banking and (ii) NEFT / RTGS, after agreeing with the terms and conditions, by clicking the dialogue box appearing in the webpage.
- viii) In case of selection of Internet Banking, the bidder will be required to select any Bank of their choice and depending on the selection, the bidder will then be guided to the webpage of the respective Bank.  
After validating the payment in the respective Bank, the system will return to the Axis Bank Payment Gateway.
- ix) In case of selection of RTGS / NEFT, the webpage will generate a payment advice.  
The Bank Account Number, IFSC of the Bank, name of the payee, i.e., Haldia Dock Complex, and the amount to be paid will be indicated in the said payment advice. The bidder will also get an SMS and e-mail detailing the same.

The bidder will be required to mention the same correctly in the Bank Challan, which is required to be filled up for payment by RTGS / NEFT in the Bank from where they intend to make the payment.

The bidders should note that Bank a/c number of HDC, mentioned in the Payment Advice, will change for each and every transaction and hence, for each and every payment, the entire process from the beginning will have to be followed for

generation of a URN Number.

- x) For payment of Bid Document Fee, identical process is to be followed.
- xi) The bidders will be able to know the status of their payment, by using the 'Enquire URN' facility, by mentioning the URN Number in the Axis Bank login page. Until such time the payment is credited to HDC's a/c, the system will show the status as 'Pending'.
- xii) The bidders should note that until such time the status remains 'Pending', the payment is not made to HDC and mere generation of URN Number will not signify payment of EM or Bid Document Fee. Hence, if the status remains 'Pending' after some time of submitting the RTGS / NEFT payment request at their Bank, then the bidders should contact their Bank to enquire about the status of RTGS / NEFT request.
- xiii) In case of any problem relating to use of the payment gateway, the bidders should contact the tender inviting authority, whose phone number and e-mail address are mentioned in the e-Tender.

#### **4.2.9 Special Note towards uploading required documents:**

The intending bidders are instructed to use "**Attach Doc**" button to upload documents in document library. Multiple documents can be uploaded.

### **4.3 Instructions related to Micro & Small Enterprises (MSEs):**

- 4.3.1 For exemption of Bid Document Fee and EMD certificate from National Small Industries Corporation (NSIC) & DIC is required.
- 4.3.2 **Micro & Small Enterprises (MSEs) registered with NSIC under Single Point Registration Scheme (SPRS)** are eligible to get the benefits under new **Public Procurement policies** for MSEs.
- 4.3.3 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.
- 4.3.4 If **Micro & Small Enterprises (MSEs)**, registered with NSIC [under single point registration scheme] 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** and **Earnest Money**, 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, KoPT. 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 MSTC (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 MSTC.

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 MSTC 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, KoPT. 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, KoPT 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, KoPT will form a binding contract, between HDC, KoPT 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, KoPT, 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 Part-I (i.e. Pre-qualification & Techno-commercial Bid) and Part-II (i.e. 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.

## **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 **Section VI Technical Specification**.

##### **5.2 Fraud and corruption:**

**5.2.1** It is the policy of **Kolkata Port Trust (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, **KoPT** :

- (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 two 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 KoPT 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 KoPT 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 **KoPT** 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 **KoPT**, in accordance

with **ITB Clause No.5.2**, at the date of contract award shall be disqualified.

**5.3.5** If any bidder has a **Licensing Agreement** or a **Technical Collaboration Agreement** or a **Joint Venture Agreement** or a **Consortium** with other bidder(s), then the bidder should comply with the following:

**5.3.5.1** A copy of **Licensing Agreement/ Technical Collaboration Agreement/ Joint Venture Agreement** is to be submitted [uploaded] along with the “Pre-qualification & Techno-commercial Bid”, duly attested by the bidder. Such Agreements should be in the nature of legally acceptable Agreements.

**5.3.5.2** The bidder should submit an additional **Supplementary Agreement**, duly signed by all the Partners of the **Licensing Agreement/Technical Collaboration Agreement/Joint Venture Agreement**, on a Non-judicial Stamp Paper of worth not less than Rs. 50.00, duly notarised, covering the following points:

**5.3.5.2.1** The **Licensing Agreement/ Technical Collaboration Agreement/Joint Venture Agreement**, irrevocable in nature, is valid for at least a continuous period of 12 (twelve) years from the date of Handing over of the Fire fighting system.

**5.3.5.2.2** One of the partners shall be nominated as the “**Lead Partner**”.

**5.3.5.2.3** The **Lead Partner** shall be authorised to incur liabilities and receive instructions for & on behalf of any & all the partners. The entire execution of the contract, including payment, shall be carried out exclusively through the **Lead Partner**.

During the entire period of the contract, the **Lead Partner** cannot be changed.

In the event of the **Lead Partner** becoming **defunct**, selection of the new Lead Partner would be made, as may be mutually agreed between the remaining partner(s) and KoPT, without any additional financial involvement. As the approval towards such new Lead Partner is the sole discretion of KoPT, it must be approved by them, in writing.

The said new Lead Partner shall also be jointly, as well as severally, liable with the remaining partner(s) for the satisfactory performance of the contract as per the scope of these bidding documents.

**5.3.5.2.4** The **scope and responsibilities** of all the Partners of **Licensing Agreement/Technical Collaboration Agreement /Joint Venture Agreement**, in **terms of financial & technical commitment/contribution**, should be **explicitly** mentioned and the Partners should be **severally & jointly responsible** for the satisfactory performance of the contract as per the scope of these bidding documents.

**5.3.5.2.5** In case of successful bidder, the **Contract Agreement** is to be signed by legally authorised signatories of all the Partners.

**5.3.5.2.6** In the event of default of any Partner in the execution of his part of the contract, the **Lead Partner** shall have authority to assign the work to any other party acceptable to the Employer (KoPT), to ensure the execution of the part of the contract. The said party shall also be jointly [with the remaining Partner(s)] as well as severally liable so far as the unfinished part of the contract is concerned.

## 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 [Part I]**.
- 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 [Part I]**.
- 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 (KoPT) 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 **KoPT** 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, KoPT. 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. **KoPT'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 **KoPT'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 **KoPT'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 **KoPT**, in writing, as set out in **ITB**.

The bidders are advised to acquaint themselves 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 & 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 KoPT, available at <http://www.kolkataporttrust.gov.in/> of 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 KoPT against any loss or damage to the property of KoPT or neighbouring 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, **KoPT** 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, KoPT 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 **KoPT** 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 KoPT, 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.** The Bid shall comprise of the following :-

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

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:

The Price Bid comprises the prices only and the same are to be submitted electronically, through the website of MSTC Limited 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 MSTC 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 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 MSTC portal**, considering the work requirements, as detailed in Part-2 (**Technical Specification**) 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 MSTC 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 Technical Specification (Part-2)] and equipment at site, erection, testing, commissioning, statutory certification, warranty obligation, O&M etc..
- (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 KoPT to get due credit against GST paid.

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

KoPT, 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 (₹)** only.

#### **5.15 Period of validity of bids**

- 5.15.1** Bids shall remain valid for the period of **180 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 **KoPT**, treating the same as non-responsive.

- 5.15.2** In exceptional circumstances, prior to the expiration of the bid validity period, **KoPT** 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 may refuse the request, without forfeiting their **Earnest Money Deposit (EMD)**. 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 **KoPT**, in writing.

#### **5.16 Earnest Money Deposit (EMD)**

- 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, shall be rejected by the Employer (KoPT), treating the same as non-responsive.

For exemption of EMD the bidder is required to upload the scanned copy of the certificate from National Small Industries Corporation (NSIC) along with DIC.

- 5.16.3** Refund of Earnest Money Deposit:

Earnest Money Deposit of the successful bidder shall be retained by KoPT 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 (two) 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 **KoPT** and contract is awarded with them, the **Earnest Money Deposit** of the **successful bidder (Contractor)** shall be retained by **KoPT** and may be converted into partial performance guarantee. Submission of Remaining amount of **Performance Guarantee / Security Deposit** (in accordance with **ITB**) and signing of the **Contract Agreement** by **KoPT** and the Contractor (in accordance with **ITB**), to be carried out subsequently.

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

**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. KoPT shall also be at liberty to deduct any of their dues from Earnest Money. It should be 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.

**D. SUBMISSION OF BIDS AND OPENING OF BIDS (EXCEPT PRICE BID)**

**5.17 Submission of bids**

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

- 5.17.1** Bidders shall have to submit their bids [both **Pre-qualification & Techno-commercial Bid** and **Price Bid**] on-line **through MSTC 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 authorised 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, 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 **MSTC Ltd.** 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 KoPT, 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 **KoPT**.
- 5.19 Priced offer**
- The Bidder should quote the offered rate appropriately in the PRICE BID, electronically, through the website of **MSTC Ltd.** 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 **indicated in the Schedule Of Tender (SOT)**.
- 5.20.2** **KoPT** 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 **KoPT** 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 **KoPT**.

**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 Bids**], 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.

## **E. 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 **KoPT** 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 **KoPT** 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 (**KoPT**) may, at their discretion, ask any bidder for a clarification of their bid. The Employer (**KoPT**) 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 (**KoPT**), 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 (**KoPT**), shall not be considered. The Employer's (**KoPT'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, KoPT’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 KoPT 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 (KoPT) 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 (KoPT), 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 (KoPT), shall not be considered. The Employer's (KoPT's) request for submission of further document(s) shall be in writing.

**5.28.2 KoPT** 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, **KoPT** 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** KoPT 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 (KoPT), 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 **KoPT**, 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** **KoPT** shall examine the bid to confirm that all terms and conditions specified in the **Technical Specification (Part-2), 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 opened. "**Price Bid**" part of other bidder(s) will be opened subsequently as per procedure. Decision of **KoPT** on this matter shall be final.

## **5.31 Opening of Price Bid**

**PRICE BIDS** of the bidders, who qualifies 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 by them 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 Comparison & Evaluation of Price-Bid and selection of Successful Bidder**

**5.32.1** While evaluating the Price Bids, the Price quoted by the Bidders against all 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.

**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.

### **5.33 KoPT’s right to accept any bid and to reject any or all bids**

**5.33.1** KoPT reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to contract award, without thereby incurring any liability to Bidders.

## **F. AWARD OF CONTRACT**

**5.34** Subject to **ITB Clause No. 5.33.1**, KoPT 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.

### **5.35 Notification of award**

Prior to the expiration of the period of bid validity or extended validity in accordance with **ITB**, KoPT 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**.

### **5.36 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 **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 **₹50.00**] & **dummy papers** (for three sets).

Immediately after receipt of the above papers & documents, KoPT will send three sets of **contract agreement form** [one set printed on Stamp Paper & dummy papers and two sets printed on dummy papers], photocopy of **one set of documentary transactions between them and KoPT** (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 **KoPT** 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.

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

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

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** Total process of executing contract agreement should be completed within 28 days of issuance of "Letter of Acceptance" by **KoPT**. Until such contract agreement is executed, the other documents referred to the definition of the term "Contract" [**GCC Clause**], shall collectively be the contract.

#### **5.37 Performance Guarantee / Security Deposit**

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

**5.37.1** 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 forfeiture of the **EMD** in accordance with **ITB**.

**5.37.1** 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 **KoPT** on the amount of Performance Guarantee / Security Deposit, held by them (as per **SCC**) at any stage.

## **SECTION -VI**

### **TECHNICAL SPECIFICATION of Existing equipments / machineries**

#### **METEOROLOGICAL DATA:**

Maximum Temperature	:	41 <sup>0</sup> C
Minimum Temperature	:	8.9 <sup>0</sup> C
Annual Rainfall (Average)	:	1500 mm
Minimum Tide	:	0.40 mtr.
Maximum Tide	:	3.46 mtr.
Average Wind Speed (Summer)	:	35 - 42 km/hour
Average Wind Speed (Winter)	:	18 - 24 km/hour
Maximum Wind Speed	:	180 km/hour [as recorded on 29.10.1999]

The Port [Haldia Dock Complex (HDC), Kolkata Port Trust (KoPT)] may experience strong winds and gales when any depression, storm or cyclone develops in the Bay of Bengal and come close to the Haldia coast.

If any other technical detail(s) is/are required by the bidder, in this context, the same may be obtained by the bidder from the Meteorological Department.

#### **INTRODUCTION ABOUT THE MECHANISED COAL HANDLING PLANT:**

HDC, KoPT has a fully Mechanized Coal Handling Plant (MCHP), with an annual design handling capacity of 3.5 Million MT. The MCHP had been commissioned in and around 1978. At present, the said plant is under commercial operation, working on a 3 (three) shift basis, handling Thermal Coal a/c Tamil Nadu Generation And Distribution Corporation Limited (TANGEDCO).

The MCHP consists of 2 (two) Wagon Tippers, 2 (two) Yard Conveyors, 2 (two) Stacker-cum-reclaimers [i.e. 1 (one) on each Yard Conveyor], 2 (two) Shiploaders and their associated Conveyor system. The system can unload 2 (two) BOXN wagons simultaneously [i.e. 1 (one) through each Wagon Tippler] and can load 1 (one) vessel at Berth No. 4 [through 1 (one)/2 (two) Shiploader(s), as per requirement]. The stacking, reclaiming and vessel loading capacities are 1,500 TPH in each stream, with an annual design plant capacity of 3.5 Million MT.

Apart from the aforesaid equipment, the plant has facilities for fire detection and fire-fighting system, air-conditioning system, communication system, water supply, drainage, approach roads control, including measuring and monitoring instruments.

#### **1.0 SALIENT FEATURES OF THE MECHANISED COAL HANDLING PLANT:**

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

Annual throughput	:	3.5 Million MT (Design)
Rated plant capacity	:	2 x 1,500 TPH
No. of streams	:	2
Mode of receipt	:	By Railway BOXN Wagons
No. of wagon unloading hoppers	:	4
Type and capacity of rake	:	58 / 59 nos. x BOXN Wagon
Mode of unloading	:	In motion / indexing storage
Stockyard capacity	:	1.5 Lakh MT (approx..)
No. of stock piles	:	4
Size of vessel	:	65,000 DWT (PANAMAX) & Handimax
Berth length	:	210 mtrs. continuous
Type of berth	:	Deck-on-piles
No. of working days/year	:	365
No. of working shift/day	:	3 (three) [8 (eight) hour each]

## 2.0 **CARGO HANDLED IN THE MECHANISED COAL HANDLING PLANT:**

Financial Year	Unloading (Million MT)	Shipping (Million MT)
2009-2010	1.06	1.50
2010-2011	2.05	2.06
2011-2012	1.89	2.14
2012-2013	1.64	1.93
2013-2014	1.19	1.47
2014-2015	1.16	1.18
2015-2016	1.44	1.55
2016-2017	1.75	1.82
2017-2018	2.09	2.18
2018-2019	2.43	2.53
2019-2020	2.64	2.75
2020-2021	2.88	3.00

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Maintenance of Mechanized Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

### 3.0 **SYSTEM DESCRIPTION:**

#### 3.1 **GENERAL:**

The MCHP consists of the following major equipment/system/building:

##### 3.1.1 **Machine/Equipment/System:**

Sl. No.	Equipment	Quantity
1	Marshalling Beetle	2
2	Charging Beetle	2
3	Belt Conveyor	15
4	Apron Conveyor	1
5	Scraper Conveyor	1
6	Wagon Tippler	2
7	Stacker-cum-reclaimer	2
8	Two-way Chute (Wagon Tippler)	3
9	Two-way Chute (Stacker-cum-reclaimer)	2
10	Two-way Chute (Conveyor system)	2
11	Rack & Pinion Gate	1
12	Vibro-feeder	4
13	EOT Crane	1
14	Sizer	1
15	Hopper (Wagon Tippler)	4
16	Shiploader	2
17	Belt Weighing Machine	4
18	Ventilation and Air Conditioning System	8
19	Dust Suppression System	1
20	Water Sprinkling Pump & Tunnel Pit Pump	3 + 2
21	Electrical, Electronics, Control, Illumination and Communication Systems	-

### 3.1.2 **Buildings/Galleries/Sub-stations:**

Sl. No.	Description
1	Rail Receival Station and Tunnel
2	Transfer Tower TT#1
3	Transfer Tower TT#2
4	Transfer Tower TT#3
5	Drive House DT#4
6	Drive House DT#5
7	Transfer Tower TT#6
8	Transfer Tower TT#7
9	Transfer Tower TT#8
10	Drive House DT#9
11	Conveyor Galleries
12	Sub-station - 2 (two) nos.
13	Plant Monitoring Room
14	Stores & Workshop
15	Amenity Building, Change Room, Compressor Room, Pump Houses, Building at up & down Railway Point, Watch Tower Building, Belt Weigher Room near TT#8, etc.

## 3.2 **RAIL RECEIVAL SECTION:**

### 3.2.1 **Railway:**

BOXN Wagons in a Rake of 59 or less Wagons are received by Railway Division of HDC, from South Eastern Railway (SER). After checking and brake releasing, the aforesaid Wagons are placed at the Feeder Lines of the Wagon Tippers, by Railway Division. The Marshalling Beetle arrests around 15 (fifteen) Wagons from the Feeder Line and feeds to the Charging Beetle, for subsequent placement at the Cradle of the Tippler by Charging Beetle. Then the Wagon is tipped and cargo is fed to the Hopper and Apron Conveyor, for subsequent movement to Vibro-feeder and Sizer respectively.

### 3.2.2 **Technical data of Train unloading/Rail receival:**

Train sizing : 58 / 59 x BOXN Wagons  
No. of Wagon unloading system : 2 (two)

Manufacturer of train unloading system : TRF Limited

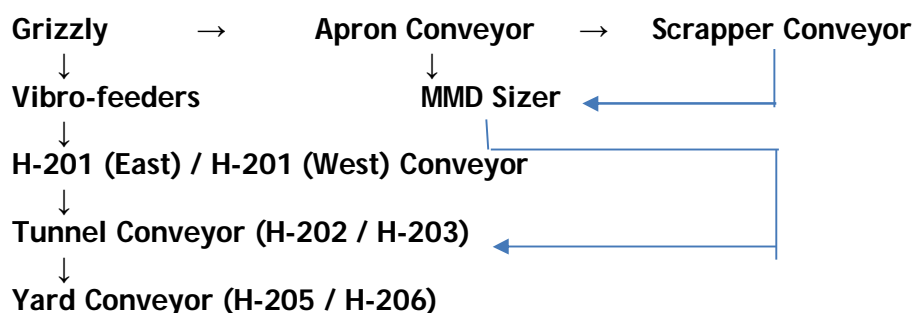
### 3.2.3 Wagon Tippler:

There are 2 (two) independent Wagon Tipplers, with individual Feeder Lines and Release Tracks. Presently, Thermal Coal is delivered in Rakes, of approximate 3,658 tonne payload each, comprising 58/59 nos. of 62 tonne BOXN Wagons.

There are 2 (two) Hoppers in each Wagon Tippler, each with a capacity of 180 tonnes. The Hoppers are covered with inclined Grizzly of size - 300 mm. Thermal Coal < 300 mm size passes through Grizzly to the Hopper. There are 2 (two) Vibro-feeders in each Wagon Tippler, installed below the Hoppers and each is being fed by 1 (one) Hopper. There is 1(one) Belt Conveyor [H-201 (East)/H-201 (West)] in each Wagon Tippler, which is being fed by the 2 (two) Vibro-feeders of each Wagon Tippler simultaneously. The Belt Conveyors feed the cargo to either of the Tunnel Conveyors [H-202/H-203] by two-way Chute operated manually. H-203 Tunnel Conveyor delivers the cargo directly to the Yard Conveyor (H-206), while H-202 Tunnel Conveyor feeds the cargo to a connecting Conveyor (H-204), which, in turn, delivers the cargo to H-205 Yard Conveyor.

Thermal Coal > 300 mm size are segregated at Grizzly and is fed to the Apron Conveyor (Plate-type Conveyor), which, in turn, feeds the cargo to the Sizer. There is a Scraper Conveyor underneath of Apron Conveyor, which collects the spillage cargo and delivers the same to the Sizer.

#### low chart of cargo at coal tippler :-



### 3.3 STOCKPILING:

#### 3.3.1 Technical data of Conveyor system:

Type of Belt	:	Nylon-Nylon
Grade	:	M24
Belt width	:	1,400 mm
Duty	:	Heavy

Each Belt Conveyor [other than those for Shiploader Boom, Stacker-cum-reclaimer Boom and Mobile Conveyor {H-201 (East) & H-201 (West)}] is operated by 3.3 kV HT Motors. Power supply of the Motors is from the Brakers of Master Control Sub-station (MCSS) or Tippler Sub-station (TSS). The entire Conveyor system is operated by an Operator from Master Control Tower (MCT). The Operator at MCT can see the position of the Conveyors from the Mimic Board at MCT.

1 mtr below Rail level]

4) Boom Conveyor : Electro-mechanical

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5) Luffing operation : Electro-hydraulic

Stacker-cum-reclaimer No. 2 has the following Drives:

- 1) Bucket Wheel : Electro-hydraulic, controlled by PLC
- 2) Slew : Electro-hydraulic, controlled by PLC
- 3) Long Travel : Electro-mechanical VVVF Drive, controlled by PLC
- 4) Boom Conveyor : Electro-mechanical
- 5) Luffing operation : Electro-hydraulic, controlled by PLC

The 2 (two) Rail-mounted travelling, slewing and luffing Stacker-cum-reclaimers operate along the Track Lines. Stacker-cum-reclaimer No. 1 is installed on H-205 Yard Conveyor and can operate on Plot Nos. 1 & 2. Similarly, Stacker-cum-reclaimer No. 2 is installed on H-206 Yard Conveyor and can work on Plot Nos. 3 & 4.

Stacker-cum-reclaimer No. 1 can stack the cargo from Wagon Tippler (by keeping its Two-way Chute in stacking mode) or can directly feed to the vessel from Wagon Tippler (by keeping its Two-way Gate in direct mode). The Two-way Gate can be operated through Electro-mechanical Actuator. Similarly, it can reclaim to feed the vessel in case of no feeding of cargo from Wagon Tippler as well as to supplement during direct feeding of cargo from Wagon Tippler.

Stacker-cum-reclaimer No. 2 can stack the cargo from Wagon Tippler (by keeping its Trailing Tripper in stacking mode) or can directly feed to the vessel from Wagon Tippler (by keeping its Trailing Tripper in direct mode). The Trailing Tripper can be operated through Electro-mechanical Actuators. Similarly, it can reclaim to feed the vessel in case of no feeding of cargo from Wagon Tippler as well as to supplement during direct feeding of cargo from Wagon Tippler.

The 2 (two) Bucket Wheel Stacker-cum-reclaimers are capable of controlled reclaiming, in the range from 100 TPH to 1,500 TPH, to enable loading of ships with limited ballast pumping capacity.

#### **3.3.4 Stockpiling operation:**

Stacker-cum-reclaimer No. 1 can stack at Plot Nos. 1 & 2 while Stacker-cum-reclaimer No. 2 can stack at Plot Nos. 3 & 4. Stacking operation at Plot Nos. 1 & 2 is done by placing Stacker-cum-reclaimer No. 1 in the respective plot and feeding the cargo from Wagon Tippler. Similar operation is carried out in case of stacking by Stacker-cum-reclaimer No. 2 at Plot Nos. 3 & 4. During stacking and reclaiming operations, First In First Out (FIFO) principle is to be maintained to eliminate fire hazard. During stacking by Stacker-cum-reclaimer No. 1, the cargo is fed from Wagon Tippler to H-202 Tunnel Conveyor to H-204 Conveyor to H-205 Yard Conveyor. Similarly, during stacking by Stacker-cum-reclaimer No. 2, the cargo is fed from Wagon Tippler to H-203 Tunnel Conveyor to H-206 Yard Conveyor.

During reclaiming by Stacker-cum-reclaimer No. 1, reclaimed cargo is fed

to H-208 Conveyor to H-209/H-210 Jetty Conveyor and in turn to Shiploader No. 1/2. Similarly, during reclaiming by Stacker-cum-reclaimer No. 2, reclaimed cargo is fed to H-207 Conveyor to H-209/H-210 Jetty Conveyor and in turn to Shiploader No. 1/2.

### **3.4 SHIP LOADING:**

#### **3.4.1 Technical data of Shiploader:**

Manufacturer	: Larsen & Toubro Limited
No. of Shiploader	: 2 (two)
Capacity	: 1,500 TPH each
Total machine weight	: 349 tonne
Rail Track gauge	: 13.716 mtrs.
Travel speed	: 0 – 5 mtr./second
No. of Drives	: 16 (sixteen)
Boom length	:

A) In Shuttle extended position : 26.89 mtr. from water side Rail

B) In Shuttle retracted position : 11.89 mtr. from water side Rail

Boom inclination : +65 / - 15°

Maximum Power demand at full load : 362.61 kVA

The 2 (two) Rail-mounted, luffing and shuttling Shiploaders operate on the wharf to load vessels between 30,000 DWT to 60,000 DWT. Each Shiploader is supplied by a separate ship loading conveying system i.e. H-209 Conveyor or H-210 Conveyor.

#### **3.4.1 Ship loading operation:**

Ship loading Conveyors H-209 & H-210 receive feed in Transfer Tower GC, either from H-207 or H-208 Conveyor, which, in turn, receive feed either from Stacker-cum-reclaimer No. 1/2 or direct feeding from Wagon Tippler. During direct feeding from Wagon Tippler, the entire Conveyor system from Shiploader to Vibro-feeder at Wagon Tippler are started one by one. In case of reclaiming by the Stacker-cum-reclaimer(s), the respective Conveyors from Shiploader to Stacker-cum-reclaimer are started one by one. All the Conveyors are interlocked with their preceding Conveyor, so that in case of stoppage of the forward Conveyor, the rear Conveyors are stopped.

### **3.5 ELECTRICAL SYSTEM:**

The existing 33/3.3 kV Sub-station, with 3 (three) 6 MVA, 33 kV/3.3 kV Transformers, caters to the power requirement for the MCHP, Lock Entrance Sub-station, 2<sup>nd</sup> Oil Jetty Sub-station and Phosphate Berth Sub-station of HDC.

For the MCHP, there is also another Sub-station, namely Wagon Tippler Sub-station (WTSS).

HT/LT Switchgear, Power Distribution Boards, Motor Control Centers, ACDB,

DCDB, LPDB, etc., as per requirement, are located in the Sub-stations.

### **3.5.1 Demand and loading factor of MCHP:**

- 1) Total connected load of the MCHP is 6 MVA (approx.).
- 2) Total operational load of the 2 (two) Receiving Streams and the 2 (two) Shipping Streams is 4 MVA (approx.), at peak load.

Main machines like Stacker-cum-reclaimers, Shiploaders, etc. have their own Electrical Transformers, MCC Panels, PLC Panels, VVVF Controllers, LPDB, HT Isolator, etc. installed on the machine itself.

In addition to the main machines/equipment/systems, the plant also has many auxiliary systems, with associated Electrical Drives and Control, like Air-conditioning System, Ventilation System, Dust Suppression System, Fire-detection and Alarm System, Inter-plant Communication System, Plant Illumination, etc.

## **3.6 CENTRALISED MONITORING:**

The entire Conveyor system is being operated by an Operator from Master Control Tower. The Operator at Master Control Tower can see the position of the Conveyors from the Mimic Board at Master Control Tower.

### **3.6.1 Control Philosophy:**

The Coal transfer system has been designed to operate as 2 (two) independent parallel streams, but routes can be set up using elements from both streams.

All drives onboard the machines are controlled by machine Operators. All applicable routes can be selected or deselected by the Operators at either end of the route or from Plant monitoring room. The selection of a route will not start any drives. Since all sequences depend upon the downstream drives operating, the downstream machine Operator [Stacker-cum-reclaimers (Stacking option) or Shiploaders] is required to initiate the route sequence start from on-board machine. The Boom Conveyor on the downstream machine will then start up, followed by the subsequent plant drives along the selected route. With all downstream plant and drives running, the up-stream operator [Stacker-cum-reclaimers (Reclaiming option) or Wagon Tippers] may then start the source of Coal. A sequence stop of the route can be initiated from Operators at either end of the route.

## **3.7 PLANT OPERATION MODES:**

### **3.7.1 Manual/Local Mode (for fixed plant):**

Control of the individual drives will depend upon the mode of operation selected. Each individual drive in the fixed plant (i.e. Wagon Tippler, Sizer, Conveyor, Feeder, Stacker-cum-reclaimers, Shiploaders, etc.) shall

have an associated manual/local mode.

These modes of control are defined as follows:

Local: In Local Mode, each drive shall be started and stopped from a Local Start/Stop Station adjacent to the drive Motor. Only hardwired interlocks for each drive, such as overload, emergency stop, travel limits and statutory safety devices, will remain part of the Motor Control Circuit. This mode is to be used during maintenance, testing and for local control.

Manual: In Manual Mode, each drive shall be started and stopped as part of a manual sequence of the selected route.

For process stream drives (Wagon Tippler, Sizer, Conveyor, Feeder, Stacker-cum-reclaimers, Shiploaders), manual/local selection will occur upon selection/de-selection of routes respectively, i.e. all drives comprising a selected route will be set to manual mode. A route cannot be selected, if any of the required plant drives are running in local or is faulted.

#### **3.7.2 Manual/Local Mode (for mobile machines):**

Each Stacker-cum-reclaimers and Shiploader will be controlled by an Operator from the on-board Control Cabin and will be equipped with its own PLC and Operator Interface Screens. The machines shall be capable of being operated in manual/local mode. In manual mode, each drive will be started and stopped as part of the automatic PLC controlled sequence, in response to commands from the Operator. The local mode is same as for fixed plant machines and is meant for maintenance purpose.

#### **3.7.3 Plant Control Points:**

The Control System Philosophy is designed for efficient operation of the plant and alteration in the field parameters. The plant controls are performed from the Plant Monitoring Room (PMR), Wagon Tippler, Stacker-cum-reclaimers and/or Shiploaders, depending upon the route in operation.

Plant control includes the following operations:

- (a) Selecting plant routes
- (b) Starting/stopping machines and plant routes
- (c) Machine movement (Travel, Slew, Luff, Shuttle) and modes (Manual/Local)
- (d) Acknowledging alarms
- (e) Setting plant variables (i.e. feed rates, etc.)

#### **3.7.4 Wagon Tippler:**

Wagon Tippers can unload Coal either to stockpiles by stacking via the Stacker-cum-reclaimers or directly to the ship via the Shiploaders.

The Wagon Tippler station is equipped with 3 (three) Operator Interface.

There are 2 (two) Charger/Marshal Cabin Operator Interface and 1 (one) Main Cabin Operator Interface at the Wagon Tippers.

After getting clearance of wagon from HDC Railways, the Charger/Marshal Cabin Operator arrests around 15 (fifteen) wagons by Marshalling Beetle. Then the respective Operator places a single wagon at East Tippler (T1) or West Tippler (T2), as the case may be. Then he gives clearance to the Main Cabin Operator, for tipping, after reversing the Charging Beetle to its parking zone as well as placement of loaded wagon to safe position on the Cradle.

After getting clearance from the Charger Cabin Operator, the Main Cabin Operator tipples the wagon, subject to prior starting of Conveyor route, Vibro-feeder, Apron Conveyor, Sizer, etc.

Scraper Conveyor needs to be operated, as per requirement, to remove accumulated spillage.

All drives and equipment, used to transfer Coal from the Tippler area to the Stacker-cum-reclaimers or direct to the Shiploaders, are monitored from the Master Control Tower Station Operator Interface. All associated route selections may be selected from either of these Operator interfaces. However, the Stacker-cum-reclaimer or Shiploader Operator will initiate the sequence starting of these routes.

Indication of the current status of drives in each part is displayed at the Mimic Board of Master Control Tower, to enable the Operator to select a flow path for the Coal, when commencing Rail unloading operation.

#### **3.7.5 Stacker-cum-reclaimers and Shiploaders:**

Control of the operation functions of each of these machines is performed by the respective on-board Operator.

Each machine is equipped with a Control Desk. The Operator Control Desk provides machine positional status, drive status and alarm indication.

#### **3.7.6 Master Control Tower (Plant Monitoring Room):**

The MCHP system monitoring and co-ordination is performed at the Master Control Tower.

The function of the Plant Monitoring Room (PMR), at the Master Control Tower, is to provide a centralized point for plant co-ordination, system performance monitoring, reporting and alarm logging.

#### **3.7.7 Local Stop/Start Stations:**

Adjacent to each drive is a Local Start/Stop Control Station, with start and lockout stop push buttons. The start push button shall only be effective when the drive is in Local Mode.

When operating from the Local Start/Stop Station adjacent to the drives, all hardwired interlocks and protection devices, such as emergency stop, pull wire and isolation switches, will be operable, but no drive to drive interlocking or blocked chute interlocking is provided.

### **3.8 PLANT SEQUENCING:**

#### **3.8.1 General:**

On receipt of a route sequence start command from the downstream machine Operator, all selected Conveyor equipment will start in sequence, from the downstream through to the most upstream. Immediately preceding the start of each drive, the respective warning Siren shall be sounded. All equipment shall be interlocked in Auto Mode such that it cannot run without its immediate downstream drive running.

A route sequence stop command will drain the system of Coal and subsequently shutdown the plant in a controlled sequence.

The plant control system incorporates trip sequences, which will shut down necessary plant, if any stoppage occurs in any part of the plant. A stoppage may be caused by deselecting a route, by switching a machine to local, by pressing the emergency stop or by any one of the protective trips. All upstream equipment will immediately stop. The downstream equipment from such a fault will continue to operate for a pre-determined time period or until the fault is rectified and reset. The upstream drives can then be restarted by initiating another route sequence start command from the downstream machine. For this purpose, the status of the relevant routes must be clearly displayed to the machine Operators.

#### **3.8.2 Route selection:**

Each Wagon Tippler, Stacker-cum-reclaimer and Shiploader Operator shall be able to select one of the two possible routes for their respective equipment. Routes may be selected by Operators at either end of the Coal flow path.

Any drive with provision for controlled feed rates, such as Wagon Tippler Belt Feeders, Stacker-cum-reclaimer Belt Feeders, shall ramp up at a controlled rate from the minimum value to the desired set point, as set by the respective Operator.

#### **3.8.3 Route sequence start:**

Sequence is started beginning with the most downstream drive in the selected route. Successive upstream drives are started after the preceding drive is running and required minimum speed has achieved. Route sequence starts or restarts can only be initiated from the Operator for the downstream machine (Stacker-cum-reclaimer and Shiploader). For the start sequence to commence, the route must be successfully set, no required drives faulted and the downstream must be ready.

#### **3.8.4 Route sequence stop:**

A route sequence stop shall have set time delays between each Conveyor

stopping, to allow the plant equipment to completely empty Coal from the Conveyors. Route sequence stops may be initiated from Operators at either end of the route. Selection of a sequence stop shall be clearly displayed to both Operators on the route.

**3.8.5 Sequence trips:**

In the event of a fault occurring on a selected drive, the faulted drive plus the upstream drives shall stop immediately. Downstream drives shall continue to operate for a pre-set time delay before shutting down. Restarting part of or the entire route shall be by the downstream Operator's route sequence start command.

**3.8.6 Fault detection:**

As most of the likely faults and their cause are programmed in the Software, the system helps in identification of almost all faults in the Coal Shiploaders and Stacker-cum-reclaimer No. 2.

Whenever a fault occurs in other places in the plant, then fault will be located as per testing, through relevant drawings.

**3.9 ANTI-COLLISION SYSTEM:**

As the 2 (two) Shiploaders travel on the same track, Anti-collision Sensors are provided to prevent collision between the 2 (two) machines.

**3.10 WEGHING SYSTEM:**

In order to maintain accurate accounts of loading and stockpile inventory, weighing systems have been incorporated into the Coal handling system, which are in H-209 & H-210 Conveyor system and in Boom Conveyor & Tipper Conveyor of Stacker-cum-reclaimer No. 2. The weighing systems work on the principle of Load Cells.

**3.11 AIR-CONDITIONING SYSTEM:**

Air-conditioning systems have been provided at Master Control Tower, Operator Cabin & E-house of Stacker-cum-reclaimer No. 2 and Machinery House of Shiploader Nos. 1 & 2.

**3.12 GENERAL & ANCILLARY ELEMENT SYSTEM:**

**3.12.1 Fire detection and alarm system:**

Fire detection and alarm system is installed in Stacker-cum-reclaimer No. 2.

For extinguishing small local fires, Portable Fire Extinguishers are provided at various locations of the MCHP, including machines/equipment.

There is plant Hydrant system for Conveyors, Transfer Towers and

Wagon Tippler station. These Hydrants are fed from a common header for process water, dust suppression and fire-fighting. From these Hydrant Valves, water is directed to the fire, through Hose and Nozzle.

#### **4.0 TECHNICAL DETAILS OF EQUIPMENT, MACHINES, SYSTEMS, ETC.:**

4.1	MAIN SYSTEM (SHIPPING & RECEIVING STREAMS)
4.1.1	Stacker-cum-reclaimer No. 1 (SR-1)
4.1.2	Stacker-cum-reclaimer No. 2 (SR-2)
4.1.3	Shiploader No. 1 (SL-1) and Shiploader No. 2 (SL-2)
4.1.4	Wagon Tippler No. 1 (WT-1) and Wagon Tippler No. 2 (WT-2)
4.1.5	H-201 (East & West) Conveyor
4.1.6	H-202 Conveyor
4.1.7	H-203 Conveyor
4.1.8	H-204 Conveyor
4.1.9	H-205 Conveyor
4.1.10	H-206 Conveyor
4.1.11	H-207 Conveyor
4.1.12	H-208 Conveyor
4.1.13	H-209 Conveyor
4.1.14	H-210 Conveyor
4.1.15	Master Control & Wagon Tippler Sub-station
4.1.16	Technical details of PLC system
4.1.17	Belt Weighing System
4.2	Air Conditioning
4.3	Illumination
4.4	EOT Crane with Hook Block
4.5	Communication facility, VHF Communication, Intercom, etc.
4.6	Cleanliness / Housekeeping
4.6.1	Grass and bush cutting details

#### **4.1 MAIN SYSTEM (SHIPPING & RECEIVING STREAMS):**

##### **4.1.1 Stacker-cum-reclaimer No. 1 (SR-1):**

Name of Manufacture : TRF Limited, Jamshedpur

No. of Equipment : 01 No.

Stacker Cum-reclaimer No. 1 runs on Long travel rail track installed on concrete base structure on both side of the yard conveyor H-205.

Stackers Cum-reclaimer consists of the following main assembly units

1. Bogie assembly and Long travel drive units
2. Main Structure
3. Slew deck and Slew drive unit.
4. Boom Assembly
5. Conveyors
6. Boom support and Luff Super Structure
7. Hydraulic system for Luff Operation
8. Tripper Assembly
9. Bucket wheel & Drive assembly
9. Electric equipment installation house
10. Chutes & Skirt boards
11. Other Accessories
  - a) Power and Control cable reeling drum
  - b) Manual & Auto Control lubrication system.
  - c) Belt cleaning system

##### **A) MAIN PARAMETERS:**

Stacking Capacity (Avg.)	: 1500 TPH
Stacking Capacity (Designed)	: 1650 TPH
Total M/c weight	: 250 MT
Stock Pile Shape	: Trapezoidal/Triangular
Maximum Height	: 11 meters.
Length of Stockpile	: 491.982 meters.
Track gauge	: 6 meters.
Rail Size	: CR-80
Length of the Travel	: 495 meters
No of points of support of main frame	: 3

**B) LONG TRAVEL:**

Total no of wheel	: 28 nos.
No. of drive Bogie unit	: 6 nos.
No. of non-drive bogie unit	: 4 nos.
No of drive wheels	: 12 nos.
No of non-drive wheels	: 16 nos.
Wheel model	: Double flanged type
Wheel tread dia	: 630 mm
Travel speed	: 5-15 m/min
Travel wheel bearing type	: Double Row Spherical Roller Bearing

Long travel provided with rail cleaners and storm lock.

**Motor:**

Make	: Kirloskar
Maximum Power	: 7.5 KW
Rpm Maximum	: 970

**Gear box:**

Make	: Flender Mcneil Gears Ltd. (Siemens)
Type	: Bevel Helical Hollow Shaft
Speed ratio	: 80:1
Gear type	: Helical gear
Oil grade	: SERVO MESH SP 220
High Speed Coupling	: Flexible Resilient (Type 124) - between Motor and Gear Box.
Input Shaft Bearing	: NU2306E.C3 - 1 (one) no. 31306 - 2 (two) nos.
1 <sup>st</sup> Int. Shaft Bearing	: 33208 - 2 (two) nos.
2 <sup>nd</sup> Int. Shaft Bearing	: 32311 - 2 (two) nos.
3 <sup>rd</sup> Int. Shaft Bearing	: NCV2926 V.CV - 2 (two) nos.
Oil Seal	: Ø25 x Ø35 x 7

**Brake:**

Type	: 18.2 kg Electro Hydraulic Thruster Brake
Drum Size	: Ø200 x 95 mm Width

**C) PCRD:**

Nos.	: 1
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	Make of motor	: Demag, Germany
	Type	: Barrel (Motorized cable reeling)
	Size	: Ø2000 x 3000 x 4 mm
	<b><u>Gearbox:</u></b>	
	Make	: Radicon Greaves Limited
	Type	: Worm Reducer (A 287)
	Speed ratio	: 10/1 RA, 11
	Oil Qty & grade	: 3 (three) liters & SERVOMESH SP 220
<b>D)</b>	<b><u>CCRD:</u></b>	
	Nos.	: 1
	Make	: Electro Zavod
	Type	: Barrel (Motorized cable reeling)
	Size	: Ø1200 x 2300 x 4 mm
	<b><u>Gear box:-</u></b>	
	Make	: Radicon Greaves Limited
	Type	: Worm Reducer (A 237)
	Speed ratio	: 10/1 ALA, 11
	Oil Qty & grade	: 2 (two) liters & SERVOMESH SP 220
<b>E)</b>	<b><u>SLEWING:</u></b>	
	Slewing speed	: 10-30 mtrs./min. at Bucket wheel tip
	Slewing angle	: +/- 105°
	<b><u>Slew Bearing:</u></b>	
	Make	: Rothe Erde, Germany
	Type	: Antifriction with external gear rim 190 teeth, Module - 18, Brg. No. 011-50-3167-001-49-1502
	Dia. Of Slew bearing	: ID - Ø4370 : OD - Ø7500
	<b><u>Slew Drive:</u></b>	
	No of drive unit	: 02 nos. (VVVF Type speed control)
	Drive	: Electro Mechanical drive
	<b><u>Motor:</u></b>	
	Make	: ABB
	Frame	: 160 ML
	Power	: 15 kW

Rpm : 1450

**H.S. Coupling:**

Make : AMTECH

Type : Pin Bush type, with integral Brake Drum

**Brake:**

Make : Bluemax

Model : 18.2 kg Electro Hydraulic Thruster Brake

Drum dia : 250 mm

**Gearbox:**

Type : Bevel Helical Hollow shaft

No. of Drive units : 2

Make : Flender-Mcneil Gears (Siemens)

Model

Ratio : 630:1

Type of lubrication : Immersed

Oil grade : SERVO MESH SP 220

**F) LUFFING:**

**Hydraulic Luff Cylinder:**

No. of cylinder : 2 No.

Luffing angle : +11° /-13°

Make : VICKERS system internation ltd.

Oil grade : SERVO SYSTEM 68

Size of the cylinder : Ø160 X Ø280 X 1105 mm

Bore dia of cylinder : Ø 200 mm

Piston rod Dia. : Ø 140 mm

Stroke length : 1860 mm

**Power Pack Unit:**

**Motor:**

Make : ABB Ltd.

Motor power : 22 kW

Rpm : 1480

Frame size : 180 ML

**Pump:**

Make : VICKERS system internation Ltd.

Model : PVH57Q1C-RSF-IS-10-C-25V-31

Type : Radial Piston

Working pressure : 160 bar (approx.)

**G) BOOM CONVEYOR DRIVE ARRANGEMENTS:**

**Motor:**

Name : Marathon Motors

Type : 3 Ph. Squirrel cage induction motor

Power : 55 kW

RPM : 1480

Volt : 415 V

Frame : 250 M

**Gearbox:**

Make : Flender-Mcneil Gears (Siemens)

Speed ratio : 18:1

Oil Grade : Servo Mesh 220

Installed Qty : 1 No.

Type of Gear : Bevel/Helical

Input Shaft Bearing : NU2309E.C3 - 1 (one) no.

31309 - 2 (two) nos.

1<sup>st</sup> Int. Shaft Bearing : 33209 - 2 (two) nos.

2<sup>nd</sup> Int. Shaft Bearing : 32312 - 2 (two) nos.

3<sup>rd</sup> Int. Shaft Bearing : NCF2928CV - 2 (two) nos.

**H.S coupling:-**

Drive side coupling : Resilent coupling, Size 152, Type A

### Pulleys:

Name of Pulley	Dia. of Drum (in mm)	Shell length (in mm)	Bearing C-C (in mm)	Bearing Housing	Bearing No.	Sleeve
Drive Pulley (Lagged)	630	1600	1950	Split	22236CCK/W33	H3136
Snub Pulley	400	1600	1950	Split	22222CCK/W33	H322

Bend Pulley	400	1600	1950	Split	22222CCK/ W33	H322
Deflector Pulley	215	1600	1950	Split	1315K	H315
Bend Pulley	400	1600	1950	Split	22222CCK/ W33	H322
Discharge Pulley	630	1600	1950	Split	22222CCK/ W33	H322

**Lagging:**

- 16 mm Thickness with diamond groove lagging for Drive pulley
- 12 mm Thickness with plain lagging for Non Drive pulley

**Belt:**

- Length : 58 mtrs.
- Belt speed : 2.65 mtr/sec
- Take up type & travel length : Sliding with screw 800 mm
- Width : 1400 mm
- Type & strength : Nylon-Nylon, 800/4 ply, M24

**Belt Cleaners:** Conventional type with rubber.

**Idlers:**

- No of troughing idlers : 120 nos.
- Size of the idlers : Ø152.4 mm x 490 mm
- No of Return idlers : 6 nos.
- Size of the idlers : Ø152.4 mm x 1600 mm

**Idler Frame:**

- No of troughing idler frame (BKT1) : 40 nos.
- No of troughing self-alignment frame : 2 nos.
- No of return idler frame : 6 nos.

**H) TRIPPER CAR:**

**Idlers:**

- No of troughing idlers : 102 nos.
- Size of the idlers : Ø152.4 mm x 490 mm
- Bearing no : BBIB 420206 SKF-make or equivalent

**Idler Frame:**

- No of troughing idler frames (BKT1) : 34 nos.
- No of troughing self alignment frames : 3 nos.
- No of return idler frames : 10 nos.
- No of return self alignment frames : 1 no.

#### **I) BUCKET WHEEL & DRIVE:**

Type of Bucket : Cell-less  
Bucket Lip Diameter : 6.8 m  
No. of Bucket : 8  
Volumetric Capacity : 0.7 m<sup>3</sup>

##### **Gear Box:**

Type : Bevel Helical  
Input Power : 85 kW  
Input RPM : 1500  
Output RPM : 7.524  
Make : Flender McNeil Gears (Siemens)

##### **Fluid Coupling:**

No. : 1 (one)  
Model : FCU - 20

##### **Shrink Disc Assembly:**

No. : 1 (one)  
Power : 85 kW  
Input RPM : 1500  
Output RPM : 7.524  
Make : Siemens

##### **Ringfeeder:**

Size : 320 mm x 405 mm x 78 mm  
Locating Ring : ID 350 mm x OD 400 mm x Width 242.5 mm - 1 (one) no.  
ID 375 mm x OD 400 mm x Length 275 mm - 1 (one) no.  
ID 381 mm x OD 451 mm x Width 35 mm - 1 (one) no.

#### **J) ELECTRICAL SYSTEM:**

1. The machine is fed from a land mounted 3.3 KV Junction Box located at midpoint of travel through 3.3 KV flexible trailing cable and onboard barrel type PCRD for reeling and unreeling of the trailing cable while the machine is traveling. The PCRD feeds 3.3 KV Power to on machine 3.3KV load break switch located inside the onboard E house and in turn to the Oil immersed type (ONAN) transformer with Class F insulation. The transformer is located outside the E house but provided with suitable enclosure with proper ventilations. The transformer steps down the 3.3 K.V. power to 433V +/- 5% and the L.T. power is fed to the MCC located inside the electric house.
2. All the motors required for running of the machine as well as allied auxiliary is fed from MCC through a combination of Armoured and flexible cables.
3. Voltage and power supply conditions: Low voltage supply

Voltage (V) : 433V ± 5%  
Frequency : 50 Hz ± 5%

- |                          |   |  |
|--------------------------|---|--|
| Phases                   | : | 3  |
| Neutral                  | : | Earthed through earth shoe on both side rails. |
| Auxiliary voltages       | : | 230 +/- 10%                                    |
| Control (V)              | : | 220 V, AC                                      |
| Lighting (V)             | : | 230 V  |
| Solenoid valves (V)      | : | 48V DC   |
| Electronic equipment (V) | : | 48V DC (VVVF Drive)                            |
4. Degree of protection:
- |                    |   |       |
|--------------------|---|-------|
| All outdoor panels | : | IP 65 |
| All indoor panels  | : | IP 54 |
| All field devices  | : | IP 65 |
| All Motors         | : | IP 65 |
5. Operation of the machine is achieved through control desk at the operators cabin.
6. The machine is controlled by an operator control desk having joysticks and push buttons.
7. Hardware signal exchange between the stacker machine and the Central Control room of the Plant is achieved through a control trailing cable and CCRD to the land mounted control Junction Box.
8. Operational and safety limits of the drives and their motions are cut off by a no. of limit switches, located strategically all over the machine.
9. Slew drives of the machine is controlled through variable voltage variable frequency (VVVF) Drive located inside the Electric house for wide range of speed control.
10. Travel position, slew position, luffing position of machine is located from operators cabin.
11. Communication within the machine and with Central control station is achieved via VHF Walkie-talkie sets.
12. **HT Isolator details:**
- |                     |   |                    |
|---------------------|---|--------------------|
| Installed Qty.      | : | 1 No.              |
| Make                | : | Siemens            |
| Year of Manufacture | : | 1998               |
| Type                | : | TKL3               |
| Un                  | : | 12 KV              |
| Ith                 | : | 31.5 KA In : 630 A |
13. **MCC Panel (Draw-out type):**

Sl. No.	Description	Type of switch gear	Type of Starter	Type of overload protection
1	Incomer	ACB	-	With shunt trip, O/L and E/F tripping
2	Conveyor	MCCB	DOL	Bi-metallic thermal type overload relay.
3	Boom Luffing	MCCB	DOL	Bi-metallic thermal type overload relay.
4	Long Travel	MPCB	DOL	Motor Protection Circuit Breaker for each motor and also overload relay.
5	Slewing	MCCB	VVVF Control	O/L protection of the VVVF Drive.
6	Lighting transformer	SFU		
7	Welding sockets	SFU		
8	Control transformer	SFU		

14. **Power Transformer:**

Rating : 400 kVA  
Voltage HV/LV : 3.3 / 0.433 kV  
No. of Phases/Frequency : 3 Ph, 50 Hz  
Insulation Class : B

**K)** Manual Lubrication system has been provided for bogie assemblies.

**4.1.2 Stacker-cum-reclaimer No. 2 (SR-2):**

Make : TRF Limited, Jamshedpur

No. of equipment : 01 No.

The SR-2 runs on two rails (single track on each side) with the base frame being supported at three points through equalizing beam and fully compensated bogies. The base frame carries a live roller slew bearing with external gear ring. The upper half of the slew ring carries the boom and slew structure. The counterweight is connected to the tail boom, so that the stability of machine is maintained under all conditions of operation. The boom and luff superstructure are raised and lowered by means of twin double acting hydraulic cylinders. The combined center of gravity is at all times within the slew ring diameter. The boom carries a bucket wheel

assembly along hydraulic motor, chutes, etc at the extreme end of the boom. The reclaimed material from the bucket wheel is fed to a boom conveyor which in turn feeds to yard conveyor via central chute of the SR-2. The operator's cabin located on the boom tip provides the optimum visibility for the operator. Access to all components requiring maintenance and inspection is provided.

Stacker Cum-Reclaimer no. 2 consists of the following main assembly units

1. Bogie Assemblies, Balancers and Long Travel Drive Units
2. Main Structure
3. Slew Deck/Structure and Slew Drive Unit
4. Boom Assembly
5. Boom Conveyors
6. Boom support and Luff Super Structure
7. Counter Weight Boon and Counter Weight
8. Bucket Wheel and Drive
9. Bucket Wheel Chute
10. Impact Table
11. Operator Cabin
12. Hydraulic system for Luff Operation
13. Chutes & Skirt boards
14. E-House
15. Other Accessories
  - a) Power and Control cable reeling drum
  - b) Manual & Auto Control lubrication system.
  - c) Belt cleaning system
  - d) Operator cabin hydraulic system
  - e) Air Conditioning System
  - f) Hanging frame, etc.
  - g) Fire protection system

**A) MAIN PARAMETERS:**

Reclaiming capacity (Avg.)	: 1500 TPH
Stacking capacity	: 1500 TPH
Total m/c weight	: 250 MT
Stockpile shape	: Trapezoidal / Triangular
Stockpile height	: 11 meter (10 meter above Rail level and 1 meter below Rail level)
Length of stockpile	: 495 meter
Width of stockpile	: 30 meter
Track Gauge	: 6 meters
Rail Size	: CR-80
Counter weight	: 96 MT

	Nos. of points of support of main frame	: 3
<b>B)</b>	<b><u>LONG TRAVEL:</u></b>	
	Total no of wheel	: 36 nos.
	No of drive	: 18 nos.
	No of driven	: 18 nos.
	Wheel model	: Double flanged type
	Travel speed	: 0-20 m/min.
	<b><u>Motor:</u></b>	
	Make	: Siemens, GERMANY
	Power	: 4 KW
	Rpm	: 1480
	<b><u>Gearbox:</u></b>	
	Make	: Siemens, GERMANY
	Type	: Bevel Helical Geared Motor.
	Speed ratio	: 70.54:1
	Gear type	: Bevel Helical Geared Motor
	<b><u>Brake:</u></b>	
	Type	: Inbuilt Electro Magnetic disc brake
<b>C)</b>	<b><u>PCRD:</u></b>	
	Nos.	: 1
	Make	: Bengal Technocrat
	Type	: Barrel (Motorized cable reeling)
	Size	: Ø2000 x 3000 x 4 mm
	<b><u>Motor:</u></b>	
	Make	: Demag, Stall Torque
	<b><u>Gearbox:</u></b>	
	Make	: I C BAUER
	Type	: G52-10-SN
	Speed ratio	: 19.28:1
	Oil grade	: SERVOMESH SP 220
	Qty.	: 3.5 Liters
<b>D)</b>	<b><u>CCRD:</u></b>	
	Nos.	: 1
	Make	: Bengal Technocrat
	Type	: Barrel (Motorized cable reeling)
	Size	: Ø1200 x 2300 x 4 mm
	<b><u>Motor:</u></b>	
	Make	: Demag, Stall Torque

**Gearbox:**

Make : I C BAUER  
 Type : G22-10-SN  
 Speed ratio : 25.55:1  
 Oil Qty & grade : 0.9 Liters & SERVOMESH SP 220

**Oil Seal No.:**

Input : 35x62x7, 38x55x7  
 Output : 42x62x8  
 Bearing No. : 6206 - 02 Nos  
 : 6306 - 01 No

**E) SLEWING:**

Slewing range : +-105 degree  
 Slew bearing : 3 row roller type  
 Make : Rothe Erde  
 Type of bearing : Roller bearing

**Slew Drive:**

No of drive unit : 2 nos. (Electro Hydraulic)  
 Drive : Electro Hydraulic drive

**Hydraulic Motor:**

Make : Hagglunds  
 Power : 22 KW  
 Rpm : 1480

**F) LUFFING:****Hydraulic Luff Cylinder:**

No of cylinder : 2 nos  
 Make : Rexroth  
 Size of the cylinder : Ø180 x Ø250 X 1535 mm  
 Piston Dia. : Ø360 mm  
 Piston rod Dia. : Ø180 mm  
 Stroke length : **1535** mm  
 Working pressure : **167** Bar

**Power Pack unit:****Motor:**

Make : ABB  
 Motor power : **30** KW  
 Rpm : 1480

**Pump:**

Make : Rexroth

Pump type : Geared pump  
Working pressure : 167 Bar

**G) BOOM CONVEYOR ARRANGEMENTS:**

**Motor:-**

Name : Marathon  
Type : 3 Ø Squirrel Cage Induction Motor  
Power : 75 kW

RPM : 1485  
Volt : 415 V  
Frame : 315 L

**Fluid coupling:-**

Make : Premium Transmission  
Model : FCU-17.75 (with Brake Drum dia. 400 mm)  
Type : Constant Fill Traction  
Installed Qty : 01 No.

**Gear box:-**

Make : Premium Transmission  
Type : Bevel/Helical B2 SF-225 (Fan cooled)  
[Hollow Output Shaft]  
Speed ratio : 12.6:1  
Installed Qty : 01 No.

**Brake:**

Make : Electromag  
Model : ET-275  
Braking Torque : 100 kgm  
Thruster : 34 kg Electro Hydraulic Thruster Brake

**Pulleys:-**

Name of Pulley	Dia. of Drum (in mm)	Shell length (in mm)	Bearing C-C (in mm)	Bearing Housing	Bearing No.	Sleeve
Drive Pulley (Lagged)	630	1600	1950	Split	22232CCK/W33	H3132
Bend Pulley	630	1600	1950	Split	22226CCK/W33	H3126

	No of troughing self alignment frames :	03 nos.				
	No of take-up pulleys	630	1600 :	1950	02 nos Split	22226CCK/ H3126
	No of (lagged) frames	630	:	08 nos		
	<b><u>Belt cleaners:-</u></b>					
	Primary Cleaner	630	1600 :	1 set, Hosch / Thejo	22226CCK/ H3126	
	Bend Pulley		:	1 set, Hosch / Thejo	22226CCK/ H3126	
	Secondary Cleaner		:	1 set, Hosch / Thejo	22226CCK/ H3126	
	Return Belt Cleaner		:	1 set, Hosch / Thejo	22226CCK/ H3126	
	Discharge	630	1600 :	1 set, Hosch / Thejo	22226CCK/ H3126	
	Fabricated Belt scrapper		:	1 no.	22232CCK/ W33	H3132
	(lagged)		:	1 no.		
	Fabricated return Belt scrapper		:	1 no.		
<b>H)</b>	<b><u>BUCKET WHEEL DRIVE:-</u></b>					
	<b><u>Motor lagging:-</u></b>					
	Name	12mm Thickness with diamond grooving			ABB	lagging for Drive pulley
	Type	12mm Thickness with plain lagging			360	Square Drive pulley
	<b><u>Belt :-</u></b>					
	Power		:		185 KW	
	RPM		:		1480 rpm	
	Width		:		1400 mm	
	Volt		:		415V	800/4, Top 5 mm, Bottom 3 mm, M24 grade
	<b><u>Hydraulic Motor:-</u></b>					
	Length of belt		:		60 meters	
	Speed		:		3.5 m/sec	
	Make		:		Hagglunds	
	Size		:		CB 25.4	meter
	Boom length		:		25.4 meter	
	Belt thickness		:		15 mm	
	Torque Arm		:			
	Take up type		:		Screw Take-up with hydraulic jack	
	Make		:		Hagglunds	
	Take up travel		:		800 mm	
	<b><u>Idlers:-</u></b>					
	Shrink Disc Element Make		:		MBB Engg. Infotech Ltd.	
	<b><u>Installed qty of idlers:-</u></b>					
	Locking Assembly Make		:		MBB Engg. Infotech Ltd.	
	Troughing idler		:		20 nos.	
	Impact idler		:		16 nos.	
	Return idlers		:		10 nos.	

I

	<b><u>Bucket:-</u></b>	
	Dia. Of Wheel / Type	: 7.5 meter / Cell-less
	RPM	: 5.78
	Make	: MS Body with Alloy steel Lip
	Numbers	: 9 Nos
	Capacity	: 850 Liters

#### I) ELECTRICAL SYSTEM:

The machine is fed from a land mounted 3.3KV Junction Box located at midpoint of travel through 3.3 KV flexible trailing cable and onboard barrel type CRD for reeling and unreeling of the trailing cable while the machine is traveling. The CRD feeds 3.3 KV Power to on machine 3.3 KV load break switch and vacuum circuit breaker located inside the onboard E house and in turn to the dry type transformer with Class F insulation. The transformer is located outside the E house but provided with suitable enclosure with proper ventilations. The transformer steps down the 3.3 K.V. power to 433V +/- 5% and the L.T. power is fed to the MCC located inside the E-house.

2. All the motors required for running of the machine as well as allied auxiliary is fed from MCC through a combination of Armoured and flexible cables.
3. Voltage and power supply conditions:

Low voltage supply

Voltage	(V)	433V
: Voltage fluctuations	%	± 5%
: Frequency	Frequency	50 Hz
: Frequency fluctuations		± 5%
: Phases		3
: Neutral		
: both side rails.		Earthed through earth shoe on

Auxiliary	voltages	230 +/- 10%
: Control	(V)	220 V, 48V DC
: Lighting	(V)	230 V
: Solenoid valves	(V)	48V DC
: Electronic equipment	(V)	48V DC (PLC)
: Control voltages		48V DC
: Digital I/O(V)		48V DC
: Signal lamp (V)/Field devices		48V DC
: Degree of protection:		48V DC
All outdoor	panels	
: All indoor	panels	IP 65
: All field	devices	IP 54
: All	Motors	IP 65
:		IP 65

4. Operation of the machine is achieved by a PLC system having a Central processing Unit located inside the electric house and a remote I/O panel located inside the operator's cabin connected by a RIO Link cable for communication.
5. The machine is controlled by an operator control desk having joysticks and push buttons and HMI.
6. Hardware signal exchange between the stacker machine and Master Control

Tower of the Plant is achieved through a control trailing cable and control CRD to the land mounted control Junction Box.

7. Operational and safety limits of the drives and their motions are cut off by a no. of limit switches, proximity switches located strategically all over the machine.
8. Long travel of the machine is controlled through variable voltage variable frequency ( VVVF) Drive located inside the E-house for wide range of speed control.
9. Travel position, slew position, luffing position of machine are detected by through HMI.
10. Communication within the machine and Master Control Tower, Office etc. is achieved through VHF Walkie-Talkie set.

**11. HT Isolator details:**

Installed Qty.	:	1 No.
Un	:	12 kV
I <sub>th</sub>	:	31.5 KA
I <sub>n</sub>	:	630 A
Make	:	Panickker
Year of Manufacture	:	2015

**12. MCC Panel (Non drawn out type) of SR- 2**

Sl. No.	Description	Type of switch gear	Type of Starter	Type of overload protection
1	Incomer	ACB	-	With shunt trip, O/L and E/F tripping.
2	Conveyor	MCCB	DOL	Thermal O/L Relay.
3	Boom Luffing	MCCB	DOL	Microprocessor based Overload and E/F Relays.
4	Bucket Wheel	MCCB	DOL	Microprocessor based O/L and E/F protection, MPCB with O/L protection, MCCB O/L & E/F.
5	Long Travel	MCCB	VVVF Control	Microprocessor based O/L and E/F protection, MPCB with O/L protection, MCCB O/L & E/F.
6	Slewing	MCCB	DOL	Microprocessor based O/L and E/F protection.
9	Lighting transformer	SFU		
10	Welding sockets	SFU		
11	Control transformer	MCCB (Incoming and outgoing)		

13. **Power Transformer:**

Rating	:	400 kVA
Voltage HV/LV	:	3.3 / 0.433 kV
No. of Phases/Frequency	:	3 Ph, 50 Hz
Insulation Class	:	B

- K)** Manual Lubrication system has been provided for bogie assemblies.  
Auto lubrication system has been provided for slewing system and bucket wheel system.

<b>4.1.3</b>	<b>SHIP LOADER-1 &amp; 2:</b>	
	Name of the manufacturer	: Larsen & Toubro Ltd.
	No. of equipment	: 2 Nos.

Ship-loaders consists of the following main assembly units

1. Travel Gear
2. Portal
3. Boom luffing arrangement
4. Hoisting drive
5. Boom Conveyor / Drive system
6. Shuttle Head
7. Belt Conveyor on the Boom and in the Shuttle Head
8. Loading Chute
9. Tripper Car
10. Accessories
  - a) Power and Control Cable Reeling Drum
  - b) E-house
  - d) Fire-fighting system
  - e) Belt cleaning system
  - f) Operator Cabin Hydraulic system
  - g) Long Travel Rail Clamps
  - h) Storm Tie Down arrangement
  - i) Lubrication system

<b>A)</b>	<b>MAIN PARAMETERS:</b>	
	Capacity	: 1500 TPH
	Type of vessels Handled	: 30,000 MT to 60,000 MT
	Total Machine Weight	: <b>349 MT</b>
	Total Installed Power	: <b>500 KVA</b>
<b>B)</b>	<b>LONG TRAVEL:</b>	
	Track gauge	: 13.716 meters
	Travel Speed	: 0 to 0.5 Mtr/Sec.
	No of Wheels in water Side	: 10 nos.
	No of Wheels in land Side	: 8 nos.
	Total No. of Wheels	: 27
	No of Drive Wheel	: 16

	Size of the Wheel (Tread)	630 mm
	: No. of Rail Clamp	01 (EACH SIDE)
	No. of Motor	16
	: Wheel Bearing No.	23226 CC/W33
	No. of Gear Box	16
	No. of Electro magnative Brake	16
	No. of Track Cleaner	4

**LT motor:-**

Type & MAKE	:	TEFC SCIM, AMKW 180 M NGEF
Power	:	15 KW
Rpm	:	1460
Voltage	:	415 V
Efficiency	:	99%

**Gear box:**

No.	:	16 nos. (8 RH + 8 LH) for each Loader
Make	:	Elecon
Type	:	KCA 225 - Vertical Bevel Helical, Hollow Shaft
Ratio	:	100 : 1
Oil used	:	SP - 320

**Brake:-**

Brake type	:	EM Disc type, In-built in motor
Make	:	EMCO

**Rail clamps:-**

Runner wheel for rail clamp	:	02(each side)
No of hydraulic rail clamp	:	02

**Power Cable Reeling Drum (PCRD):-**

Reeling drive type	:	Mono spiral
Drum diameter	:	1800 mm
Motor type	:	Stall torque

**Control Cable Reeling Drum (CCRD):-**

Reeling drive type	:	Mono spiral
Diameter	:	1000 mm
Motor type	:	Stall torque

<b>C)</b>	<b>Trailing Tripper:</b>	
	Length of tripper	: 69 meters
	No wheels	: 4 nos.
	No of troughing idlers	: 174 nos.
	No of impact idler	: 01 no.
	No of return idlers using in tripper car	: 04 nos.
	Size of troughing idler	: □□□□□□x□490mm
	Size of impact idler	: □□□□□□x□490mm
	Size of return idler	: □□□□□□x□□□□0mm
	Bearing designation	: 23122CC/C3 W33
	Bearing housing type	: In-built in boggy steel structure

	<b><u>Tripper Car Pulleys:</u></b>	
	Discharge pulley :	1 no.
	Discharge pulley dimension :	Ø800 x 1600 mm
	Bearing housing type :	In-built in bogie steel structure.
	Bearing no :	23122 CC/C3 W33
	Bend pulley :	2 nos.
	Bend pulley dimension :	Ø630X1600mm
	Bearing housing for bend pulley :	SD3144
	Hold down pulley :	1 no
	Dimension of hold pulley :	Ø400X1800mm

<b>E)</b>	<b><u>BOOM CONVEYOR OF SHIP LOADER:</u></b> <b><u>Boom and shuttle conveyor:-</u></b>	
	Boom Conveyor speed :	3.60 m/Sec
	Belt Width :	1400 mm
	Belt length :	105/115 meters
	Type of belt :	1000/5, Top 8 mm, Bottom 4 mm, M24 grade Nylon-Nylon, Nominal circus thickness 7.0 mm
	Boom length at the stage of extended :	26.89 meters
	Boom length at the stage of retracted :	11.89 meters
	No of frames using in carrying :	28 nos.
	<b>No of troughing idlers (TR-1)</b>	84 nos.
	Troughing idler dimension :	Ø152.4 mm x 490 mm
	No. of return roller (BR-1)	16
	<b><u>Pulley:-</u></b>	

Name of Pulley	Dia. of Drum (in mm)	Shell length (in mm)	Bearing C-C (in mm)	Bearing Housing	Bearing No.	Sleeve	Ringfeeder ID / OD
Drive Pulley (Lagged) [SL-1]	630	1600	1950	Split	23128CCK/W33	H3128	150 / 200
Drive Pulley (Lagged) [SL-2]	630	1600	1950	Cylindrical	22224S.MB	-	-
Discharge Pulley	630	1600	1950	Split	23128CCK/W33	H3128	140 / 190
Shuttle Tail Pulley	630	1600	1950	Split	23228CCK/W33	H2328	140 / 190
Diversion Pulley Pulley	630	1600	1950	Split	23228CCK/W33	H2328	140 / 190
Top Snub Pulley	400	1600	1950	Split	23024CCK/W33	H3024	130 / 80
Pressure Pulley	400	1600	1950	Split	23024CCK/W33	H3024	130 / 80
CWT 1 <sup>st</sup> Snub Pulley	630	1600	1950	Split	22222CCK/W33	H322	-

CWT Hold Down Pulley	630	1600	1950	Split	22222CCK/ W33	H322	-
CWT 2 <sup>nd</sup> Snub Pulley	630	1600	1950	Split	22222CCK/ W33	H322	-
Non-drive Pulley	400	510	800	Split	22213EK/ W33	H313	-

**Boom Conveyor:**

**Motor:**

Make : NGEF/Crompton Greaves  
Type : 315L  
Power : 132 KW  
Speed : 1480 Rpm

**Fluid coupling:** (Between Motor and Gear Box Input Shaft)

Make : Fluidomat  
Type : **150 kW / Constant Fill Traction**  
Oil Grade : **SS 32**

**Gear box:**

Make : Elecon  
Type : Bevel Helical  
Power : **45 kW**  
Ratio : 71:1  
n1 : 1000 Rpm  
Oil : Servo mesh sp 320 / 90 litres capacity

**Shuttle head:-**

Travelling speed : 0.33 m/sec (Maximum)  
Travel length : 15 meter

**Motor:-**

Make : NGEF/Crompton greaves  
Type : AMKW 280 S  
Power : 45 KW  
Speed : 980 Rpm

**Brake:-**

Design : Ø500 mm Calliper Disc Brake ; 50 kg Thruster / 50 mm Stroke  
No of drums : 2

**Brake lever:-**

Make : Electromag/Bluemax.  
Type : Electro Hydraulic operated disc brake.

**Gear box:-**

Make : Elecon  
Type : **Spiral** Bevel Helical/KCN-355  
Power : 2 x 45 kW  
Reduction ratio : 71:1  
n1 : 980 Rpm  
Oil grade : Servo mesh sp 320 / 90 litres

**Coupling:**

Input Coupling : High Speed Gear Coupling BZBG - 560

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Output Coupling : Hollow Shaft Multi Disc Coupling

**Bearing:**

Input Shaft : 31314 – 2 nos. / 22314 – 1 no.

1<sup>st</sup> Intermediate Shaft : 32317 – 2 nos.

2<sup>nd</sup> Intermediate Shaft : 30324 – 2 nos.

Output Shaft : 32034 – 2 nos.

**Oil Seal:**

Input : 65 x 85 x 10

Output : 170 x 200 x 15

**H) ELECTRICAL ARRANGEMENTS OF MACHINES**

1. The machine is fed from a land mounted 3.3KV Junction Box located at midpoint of travel through 3.3 KV flexible trailing cable and onboard barrel type CRD for reeling and unreeling of the trailing cable while the machine is traveling. The CRD feeds 3.3 KV Power to on machine 3.3 KV Isolator located inside the below the E-house and in turn to the Dry type transformer with Class F insulation. The transformer is located outside the E-house but provided with suitable enclosure with proper ventilations. The transformer steps down the 3.3 K.V. power to 433V +/- 5% and the L.T. power is fed to the MCC located inside the E-house.

2. All the motors required for running of the machine as well as allied auxiliary is fed from MCC through a combination of Armored and flexible cables.

3. Voltage and power supply conditions: Low voltage supply

Voltage (V) : 433V

Voltage fluctuations % :  $\pm 5\%$

Frequency : 50 Hz

Frequency fluctuations :  $\pm 5\%$

Phases : 3

Neutral : Earthed through earth shoe on both side rails.

Auxiliary voltages : 230 +/- 10%

Control (V) : 220 V

Lighting (V) : 230 V

Electronic equipment (V) : 24 V, 48V DC (PLC) Digital I/O(V)

: 24V, 48V DC

Field devices : 48V DC

4. Degree of protection:

All outdoor panels : IP 65

All indoor panels : IP 54

All field devices : IP 65

All Motors : IP 65

5. Operation of the machine is achieved by a PLC system having a Central processing Unit located inside the E-House and I/O panel also located inside the E-House.

6. The machine is controlled by an operator control desk having joysticks and push buttons.

7. Hardware signal exchange between the Shiploader and the Master Control Tower of the Plant is achieved through a control trailing cable and control CRD to the land mounted control Junction Box.

8. Operational and safety limits of the drives and their motions are cut off by a no.

of limit switches, proximity switches located strategically all over the machine.

9. Long travel, Shuttle drive and Boom luff drive of the machine are controlled through variable voltage variable frequency (VVVF) drives located inside the E-House for wide range of speed control.
10. Travel position, luffing position & Boom shuttle position of machine are detected by the operators from the operators Cabin.
11. Communication within the machine and with Master Control Tower, Wagon Tippler Cabin & Office is achieved via VHF Walkie-Talkie Set.

**12. HT Isolator details:**

Installed Qty.	:	2 Nos.
Type	:	DTP90/630 A
Un	:	3.3 kV
Ith	:	31.5 KA
In	:	630 A
Make	:	Driescher Panickker
Year of Manufacture	:	1999

**13. MCC Panel (draw out type) of Shiploader-1 & 2**

Sl. No.	Description	Type of switch gear	Type of Starter	Type of overload protection
1	Incomer	ACB	-	With shunt trip, O/L and E/F module.
2	Conveyor	MCCB	DOL	Thermal O/L Relay.
3	Boom Luffing	MCCB	VVVF Control	Microprocessor based Relay.
5	Long Travel	MPCB	VVVF Control	Microprocessor based Relays.
7	Shuttle drive	MCCB	VVVF Control	Microprocessor based Relays.
9	Lighting transformer	SFU		
10	Welding sockets	SFU		
11	Control transformer	MCCB (Incoming & Outgoing )		

**4.1.4 Wagon Tippler: 1 & 2**

**Cradle Hoist:**

**Motor:-**

Make	:	Siemens/Crompton Greaves
Type	:	355 S
Power	:	110 kW
Speed	:	980 Rpm

**Brake:-**

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Make	:	M/s. Witton (Made in England)
Type	:	Electro Magnetic.
No of drums	:	1 no.
Size of Drum	:	18" Dia. (Ø457 mm x 210 mm Width)

**Gear box:-**

Make	:	Allenmax - New Allenberry Works
Type	:	Bevel Helical
Power	:	274 HP
Reduction ratio	:	36.5:1
n1	:	740/720 RPM
Oil grade	:	Servo mesh sp 220

**High Speed Fluid Coupling:**

No.	:	1 (one) no. in each Tippler
Make	:	Pembril
Size	:	FCU-23
Oil Grade	:	SS-46
Type	:	Constant Fill Traction
Safety Device	:	Fusible Plug

**Rope Pulleys for Counter Weight:**

PCD 950 mm x Pin dia 150 mm suitable for 44 mm rope dia. - 4 nos. for each Tippler.  
PCD 950 mm x Pin dia 170 mm suitable for 44 mm rope dia. - 4 nos. for each Tippler.

**Winch Drum:**

Two nos. winch drum (One left hand and one right hand drum).  
Forward Winch Drum supported on both end by Bush Bearing and Cylindrical Plummer Block.  
Reverse Winch Drum supported on both end by Bush Bearing and Cylindrical Plummer Block.  
Clutch Unit - Electro Mechanical Liner type.  
High Speed Coupling between Motor and Gear Box - Flexible Resilient FX126, similar to Wellman.  
Low Speed Coupling - Oldham Coupling.

**Cardan shaft:**

Extended from both ends of Gear Box Output and fitted with both ends of Counter Weight Shaft.

**Side Bolster fitted with Rubber Fender** [No. of Bolt - 35 nos.].

**End Frame:** 2 (two) nos.

**Longitudinal Beam:** 1 (one) no.

**Transverse Beam:** 4 (four) nos.

**Rubber Pad for Transverse Beam:**

Size: 985 mm x 150 mm x 75 mm thick - 4 (four) nos.

Size: 685 mm x 150 mm x 75 mm thick - 4 (four) nos.

**Hoist Equalizer for Cradle Hoist Rope attachment:** 2 (two) nos.

**Counter Weight Rope attachment:** 2 (two) nos.

**Cradle Roller:** 2 (two) nos.

**Cradle Slotted Bearing:** 2 (two) nos.

**Counter Weight Rope:**

Steel Wire Rope - 44 mm Dia. / 6 x 36 Construction / RHO/LHO / Tensile Strength - 1770 N/mm<sup>2</sup> / FMC (Sisal) / Ungalvanized / 39 m Length / One end Socket fixing and other end free - 2 (two) nos. for each Tippler [1 (one) RHO and 1 (one) LHO].

**Cradle Hoist Rope:**

Steel Wire Rope - 44 mm Dia. / 6 x 36 Construction / RHO/LHO / Tensile Strength - 1770 N/mm<sup>2</sup> / FMC (Sisal) / Ungalvanized / 28 m Length / One end Socket fixing and other end free - 4 (four) nos. for each Tippler [2 (two) RHO and 2 (two) LHO].

**MMD Sizer (Crusher):**

<u>Make</u>	:	<b>MMD Mineral Sizing Limited, England</b>
<u>Rating</u>	:	<b>Heavy Duty</b>
<u>Model</u>	:	<b>MMD 006 Series Twin Shaft Sizer</b>
<u>Gear Box</u>	:	Serial No. : 0060043 Ratio : 30:1 Integral Gear Box Type of Oil used : Servo System - SS 320 Oil capacity : 550 litres
<u>Capacity</u>	:	<b>1,500 TPH</b>
<u>Input size of Coal</u>	:	1,500 mm
<u>Output size of Coal</u>	:	200 mm

**Breaker Shaft : MMD 750 Series (750 mm Centres):**

<u>Breaker Shaft</u>	<u>Description</u>	<u>Tooth Cap</u>
Drive	4 Tooth x 8 Ring	32 nos.
Driven	4 Tooth x 8 Ring	32 nos.

**Bearings used in Gear Box and Breaker Shaft:**

<u>Bearing No. (SKF-make)</u>	<u>Description</u>	<u>No.</u>
Double Row Spherical Roller Brg. 22318 CC/W33	Input Shaft	2
Ball Bearing 61824	Input Shaft	1
Double Row Spherical Roller Brg. 24124 CC/W33	2 <sup>nd</sup> Redn. Pinion Shaft	2
Double Row Spherical Roller Brg. 24130 CC/W33	3 <sup>rd</sup> Redn. Pinion Shaft	2
Double Row Spherical Roller Brg. 24048 CC/W33	4 <sup>th</sup> Redn. Pinion Shaft	2
Double Row Spherical Roller Brg. 23152 CC/W33	Drive Breaker Shaft	2
Double Row Spherical Roller Brg. 23152 CC/W33	Driven Breaker Shaft	2

**Oil Seals used in the Gear Box and Breaker Shafts:**

<u>Oil Seal No. ( SKF-make)</u>	<u>Description</u>	<u>No.</u>
80 x 110 x 12 / 13	Input Shaft	2
300 x 340 x 20	Breaker Shafts	8

Lubrication of Breaker Shaft Bearings [4 (four) nos.] by Servo Gem EP - 2 Grease or Lithium Complex EP NLGI No. 2 or Century Lupus Regular A2 or Silkolene G 62 Lithium Base.

**Fluid Coupling:**

Make	: Pembril
Size	: FCU - 23
Type	: Constant Fill Traction
Oil Grade	: SS 46 / Shell Tellus 46
Safety Device	: Fusible Plug

**Apron Conveyor:**

The Apron Conveyor comprises a specially fabricated frame, on which 2 (two) Heavy Duty Endless Link Assemblies are wound. The Apron Flights of Rolled Steel are bolted on the Chains and are used for conveying the material. The Link Assemblies and the Flights are supported and guided on top of the frame by Deck Rollers and are supported on the return side by Return Rollers. The drive arrangement is connected to the Counter Shaft of the Apron Conveyor by Couplings. The Counter Shaft, in turn, drives the Drive Shaft, by means of a Pinion and Bull Gear. On the rear end of the Apron Conveyor is the Tail End Wheel Assembly, for guiding the Link Assemblies. The Deck Assemblies slack adjustment is done by operating the Take-up Adjusting Hydraulic Cylinders.

Make	: Larsen & Toubro Limited
Design capacity	: 1,000 TPH
Inclination	: 0 degree
Material	: Coal, R.O.M
Bulk Density	: 0.8 T/cu.m
Center distance	: 24,500 mm
Pan Width	: 1,800 mm
Pan Width inside Skirt Board	: 1,700 mm
Skirt Board Length	: 8,940 mm
Maximum Deck Speed	: 16.51 m/min
Model	: T 50
Open Gear Pair Reduction Ratio	: 83:15
No. of Apron Flight of Rolled Steel	: 229 nos.
No. of Conveyor Deck Rollers	: 74 nos.
No. of Conveyor Return Rollers	: 36 nos.

**Gear Box:**

Make	:	Elecon / New Allenberry Works
Type	:	KCN - 315 (LH) Spl.
Rating	:	100 HP
Gear Box Ratio	:	45:1
Type of Oil used	:	Servo Mesh SP - 220
<b><u>High Speed Coupling</u></b> (between Motor and Gear Box)	:	FENNER Fenaflex Tyre type Flexible Coupling - F120.
<b><u>Low Speed Coupling</u></b> (between Gear Box output and Apron Conveyor Counter Shaft)	:	Concord GC - OLSP - 100 ; Shear Pin type Flexible Gear Coupling ; Shear Torque - 2741 ± 274 kgf-m.

**Bearing:**

Drive Shaft/Counter Shaft	:	23048 CCK/W33 + H3048
Tail End Drum/Take-up Drum	:	23024 CK + H3024

**Scrapper Conveyor:**

The Scrapper Conveyor consists of a trough assembly, within which a scrapper chain assembly travels. The round link chains and fabricated plate assembly runs on scrapper trough while conveying spillage and on roller and shaft assembly while returning. The drive arrangement directly rotates the drive shaft through motor and reduction gear box. At the rear end, the scrapper tail wheel assembly guides the round link chain assembly, which is also used for chain adjustment by screw take-up.

Make	:	Larsen & Toubro Limited
Design capacity	:	10 TPH
Inclination	:	0 degree
Material	:	Coal spillage from Apron Conveyor
Center distance	:	24,033 mm
Width of Scrapper Trough	:	2,240 mm
Maximum speed of Conveyor	:	11.01 m/min
No. of Scrapper Flight	:	44 nos.
No. of Chain (19 Segment)	:	88 nos.
No. of Chain (9 Segment)	:	88 nos.
No. of Chain Shackles fitted with Hex. Nut and Distance Plate	:	176 nos.
Gear Box Ratio	:	70:1
Coupling	:	Pin Bush type

**Marshalling Beetle:**

Used for hauling around 15 (fifteen) nos. loaded BOXN Wagons, each carrying approximately 62 MT of Coal, to feed the Charger Beetle. It consists of single body, fitted with 2 (two) nos. Propelling/Sector Arm [Bearing of Propelling/Sector

Arm - 22213 CC/W33].

**Forward drive:**

Motor	: 37 kW
Make	: GEC
<u>Gear Box:</u>	
No.	: 2 (two) nos.
Make	: New Allenberry Works, Kolkata
Type	: C-112
Input RPM	: 960
Input HP	: 49.6
Ratio	: 100:1
Forward Rope Pulley	: 3 (three) nos. each / 760 PCD / Bearing No.: 30224

**Reverse drive:**

Motor	: 22 kW
Make	: Siemens
<u>Gear Box:</u>	
Make	: Radicon
Type	: Worm Reducer (U-1400)
Ratio	: 60:1 L/R
Reverse Rope Pulley	: 5 (five) nos. each / 500 PCD / Bearing No.: 30217

**Winch Drum:**

**Forward (One at East side & other at West side):** Fitted with Steel Wire Rope - 38 mm Dia. / 6x36 / FMC / RHO / Tensile Strength 1,770 N/mm<sup>2</sup> / Galvanized / 400 m Length / One end Socket fixing and other end free.

**Reverse (One at East side & other at West side):** Fitted with Steel Wire Rope - 20 mm Dia. / 6x36 / FMC / RHO / Tensile Strength 1,770 N/mm<sup>2</sup> / Galvanized / 725 m Length / Both end free.

**Brake Unit:**

Type	: Electro Hydraulic Thruster / Band Brake
Capacity	: 34 Kg
Dia. of Brake Drum	: 400 mm
Coupling	: Flexible Resilient Coupling - 2 (two) nos.

**Charging Beetle:**

Used for placement of 1 (one) loaded Wagon on Tippler Cradle. During placement of loaded Wagon, the empty Wagon on the Cradle is pushed automatically towards the Empty Line. It consists of 3 (three) part body, fitted with 2 (two) nos. Propelling/Sector Arm [Bearing of Propelling/Sector Arm - 22213 CC/W33].

**Forward (One at East side & other at West side):** Fitted with Steel Wire Rope - 32 mm Dia. / 6x36 / FMC / RHO / Tensile Strength 1,770 N/mm<sup>2</sup> / Galvanized / 75 m Length / One end Socket fixing and other

end free.

**Reverse (One at East side & other at West side):** Fitted with Steel Wire Rope -  
32 mm Dia. / 6x36 / FMC / RHO  
/ Tensile Strength 1,770 N/mm<sup>2</sup>  
/ Galvanized / 125 m Length /  
One end Socket fixing and other  
end free.

The Forward & Reverse Ropes are winded on the same Winch Drum.

**Brake unit:**

Type : Electro Hydraulic Thruster  
Capacity : 34 Kg  
Dia. of Brake Drum : 400 mm

**Vibro Feeder:**

Make : TRF Limited  
Type : TE-11  
Stroke : ½''  
RPM : 800 mm  
Pulley : 'V' groove, 3 x C-124 belt.  
Motor : 2 (two) nos., 22 kW for each Vibrofeeder.  
Vibro Feeder Drive Shaft/  
Non-drive Shaft Bearing No.: 22322 EJA/VA/405 OR 22322 E

**Grizzly:**

Size : (300 x 300) mm pocket size.  
No. installed : Intermediate 4 (four) nos. on each side.  
Corner Grizzly : 2 nos. (one left hand and one right hand) on each side.  
Hopper : 2 (two) nos. on each side, placed below the Grizzly.

**4.1.5 H-201 (East & West)CONVEYOR**

BELT MOVING DIRECTION



1. DRIVE PULLEY (Lagged)

2.Tail Pulley with Screw Take-up arrangement

**1. Motor:-**

Name : Marathon/Crompton greaves  
Type : 3 Ø Squirrel Cage inductions  
motor  
Power : 30 KW  
RPM : 1480 rpm  
Volt : 415V  
Frame : 280 S

**2. Gear coupling:-** [1 (one) no. on each side]

Size : GC-8  
Type : Spur toothed

**3. Gear box:-** [1 (one) no. on each side]

Make : New Allen Berry  
 Type : BH-65R/GS 50D  
 Speed ratio : 20:1  
 Hold back unit : Fitted at intermediate shaft.  
 Oil : Servo mesh  
 SP220

**4. Flexible resilient coupling:-** [1 (one) no. on each side]

**High Speed Coupling** : Fitted between motor shaft & Gear box input

**5. Pulleys:-** (for each side)

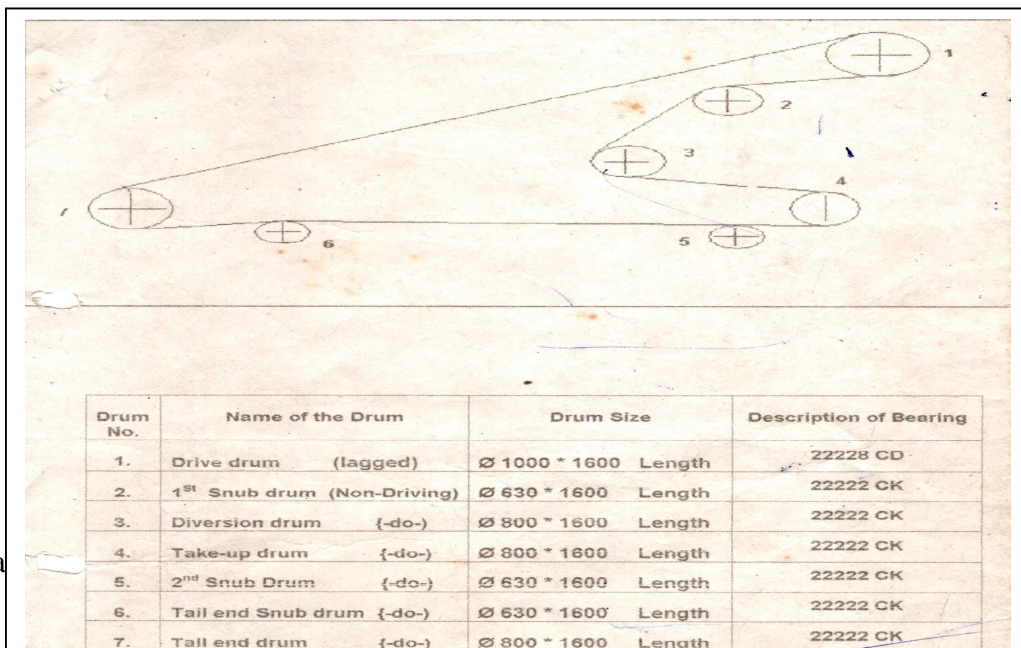
Pulley Name	Drum dia (in mm)	Brg. Dia (in mm)	Total shaft lg. (i)	Brg. C-C (in mm)	Bearing Housing	Bearing number	Sleeve
Drive (D1)	800	140	2100	1950	Cylindrical	22228C	No
Tail (N1)	630	80	2000	1925	THD Take-up	22316	No

**6. Belt :-**

Length : 45/45.5 m  
 Width : 1400 mm  
 Strength : 800/4  
 Rubber thickness : 5 mm Top/3 mm Bottom  
 Grade : M-24, Heavy duty, Nylon-Nylon  
 Nominal Carcass thickness : 6.0 mm  
 Type of edge : Cut edge construction  
 Speed : 2.75 m/sec

**7. Idlers:-** (for each side)

Frame Type : BKT1  
 No. of Bracket : 25 nos.  
 Size of Impact idler : Ø152.4 mm x 490 mm  
 Installed qty of idlers : 75 nos.  
 Installed qty of return roller : 7 (seven) nos.  
 Size of return roller : Ø152.4 mm x 1600 mm

**4.1.6 H-202 CONVEYOR**

**1. Motor:-**

Name	:	Marathon Motors
Type	:	3 Ø Squirrel Gauge induction motor
Power	:	150 kW
RPM	:	1480 rpm
Volt	:	3.3 kV

**2. Fluid coupling:-**

Make	:	Fluidomat
Model	:	T12/08
Rating	:	150 kW
Type	:	Constant Fill Traction
Installed qty	:	1 (one) no.
Oil Qty	:	15 ltrs.
Oil Grade	:	SS - 32
Safety devices	:	FUSIBLE TRIP $145^0 \pm 5^0$ FUSIBLE PLUG $165^0 \pm 5^0$

**3. Gear box:-**

Make	:	New Allen Berry Works
Type	:	CG-85/SC-V
Rating	:	150 KW/201 HP
Inst. Qty of gear box	:	01 No.
Speed ratio	:	28:1
Hold back unit	:	Fitted at intermediate shaft.
Oil Qty & grade	:	80 Liters & Servo mesh - SP220
Type of Gear	:	Double Helical

**4. Gear coupling:** : GC-10 [Spur Toothed] - 1 (one) no.  
**(Fitted between Motor & Gear Box input)**

**6. Belts:-**

Length	:	219 m
Width	:	1400 mm
Strength	:	800/4 ply, 5 mm top, 3 mm bottom
Grade	:	M-24
Duty	:	Heavy, Nylon-Nylon
Nominal Carcass Thickness	:	6.0 mm
Type of edge	:	Cut edge construction
Troughing angle	:	30°
Speed	:	2.75 m/sec

**7. Idler:-**

No. of troughing idlers (TR-1)	:	288 nos.
Size of the idlers	:	Ø152.4 mm x 490 mm
No of return rollers (BR-1)	:	35 nos.

Size of the rollers	:	Ø152.4 x 1600 mm
No of garland idlers	:	4 nos.
Size of the idlers	:	Ø152.4 mm x 700 mm

#### **8. Idler's frame s:-**

No of troughing idler frames (BKT-1)	:	96
No of return roller holding bracket	:	.....
No of return self alignment frames	:	.....
No of garland idler links	:	.....

### **4.1.7 H-203 CONVEYOR**

#### **1. Motor:-**

Name	:	Marathon Motors
Type	:	3 Ø Squirrel Gauge induction motor
Power	:	150 kW
RPM	:	1480 rpm
Volt	:	3.3 kV

#### **2. Fluid coupling:-**

Make	:	Fluidomat
Model	:	T12/08
Rating	:	150 kW
Type	:	Constant Fill Traction
Installed qty	:	1 (one) no.
Oil Qty	:	15 Ltr.
Oil Grade	:	SS - 32
Safety devices	:	FUSIBLE TRIP $145^0 \pm 5^0$ FUSIBLE PLUG $165^0 \pm 5^0$

#### **3. Gear box:-**

Make	:	New Allen Berry Works
Type	:	C-138 Special / G-125
Rating	:	220 kW / 295 HP
Inst. Qty of gear box	:	1 (one) no.
Speed ratio	:	29.4 : 1
Hold back unit	:	Fitted at intermediate shaft.
Oil Qty & grade	:	270 Liters & Servo mesh - SP220
Type of Gear	:	Double Helical
Scheme	:	V

#### **4. Gear coupling:** : GC-10 [Spur Toothed] **(Fitted between Motor & Gear Box input)**

#### **5. Belts:-**

Length	:	241 m
Width	:	1400 mm
Strength	:	800/4 ply, 5 mm top, 3 mm bottom
Grade	:	M-24
Duty	:	Heavy, Nylon-Nylon

Type of edge	:	Cut edge construction
Carcass thickness	:	6.0 mm
Troughing angle	:	30 <sup>0</sup>
Speed	:	2.75 m/sec

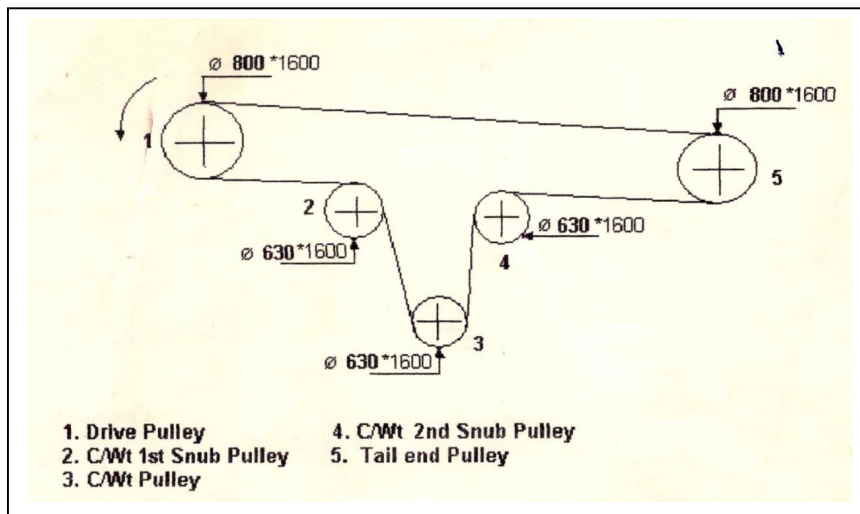
#### **6. Idler:-**

No. of troughing idlers (TR-1)	:	321 nos.
Size of the idlers	:	Ø152.4 mm x 490 mm
Bearing no	:	BBIB 420206
No of return rollers (BR-1)	:	37 nos.
Size of the rollers	:	Ø152.4 mm x 1600 mm
Bearing no	:	BBIB 420206
No of garland idlers	:	4 nos.
Size of the idlers	:	Ø152.4 mm x 730 mm
Bearing no	:	BBIB 420206

#### **7. Idler's frame s:-**

No of troughing idler frames (BKT-1)	:	107
No of return roller holding bracket	:	74
No of return self alignment frames	:	3
No of garland idler links	:	.....

### **4.1.8 H-204 CONVEYOR**



#### **1. Motor:-**

Name	:	Crompton Greaves
Type	:	3 Ø Squirrel Gauge induction motor
Power	:	75 kW
RPM	:	1480 rpm
Volt	:	415 V

#### **2. Fluid coupling:-**

Make	:	Pembril Model
:	:	FCU 17.75
Type	:	Constant Fill Traction
Installed qty	:	1 (one) no.
Oil Qty	:	15 Ltr.
Oil Grade	:	SS - 46

Safety devices : FUSIBLE PLUG 165<sup>0</sup> ± 5<sup>0</sup>

### **3. Gear box:-**

Make : New Allen Berry Works  
Type : BH-85 Special / CG-85  
Rating : 150 kW / 201 HP  
Inst. Qty of gear box : 1 (one) no.  
Speed ratio : 23:1  
Hold back unit : Fitted at intermediate shaft.  
Oil Qty & grade : 65 Liters & Servo mesh - SP220  
Type of Gear : Double Helical

**4. Gear coupling:** : GC-10 [Spur Toothed]  
**(Fitted between Motor & Gear Box input)**

### **5. Belts:-**

Length : 132 m  
Width : 1400 mm  
Strength : 800/4 ply, 5 mm top, 3 mm bottom  
Grade : M-24  
Duty : Heavy, Nylon-Nylon  
Carcass thickness : 6.0 mm  
Troughing angle : 30<sup>0</sup>  
Speed : 2.75 m/sec

### **6. Idler:-**

No. of troughing idlers (TR-1) : 159 nos.  
Size of the idlers : Ø152.4 mm x 490 mm  
Bearing no : BBIB 420206  
No of return rollers (BR-1) : 18 nos.  
Size of the rollers : Ø152.4 mm x 1600 mm  
Bearing no : BBIB 420206  
No of garland idlers : 5 nos.  
Size of the idlers : Ø152.4 mm x 730 mm  
Bearing no : BBIB 420206

### **7. Idler's frame s:-**

No of troughing idler frames (BKT-1) : 53  
No of return roller holding bracket : 36  
No of return self alignment frames : 2  
No of garland idler links : .....

## **4.1.9 H-205 CONVEYOR:**

### **1. Motor:-**

Name	:	Marathon Motors
Type	:	3 Ø Squirrel Cage induction motor
Power	:	2 (two) nos. 150 kW
RPM	:	1480 rpm
Volt	:	

: 3.3 kV

## **2. Fluid coupling:-**

Make	:	Pembril Model
:	:	FCU-20
Type	:	Constant Fill Traction
Installed qty	:	2 (two) nos.
Oil Qty	:	15 Ltr.
Oil Grade	:	SS - 46
Safety devices	:	FUSIBLE TRIP $145^0 \pm 5^0$ FUSIBLE PLUG $165^0 \pm 5^0$

## **3. Gear box:-**

Make	:	MAMC
Type	:	Helical
Rating	:	220 kW
Inst. Qty of gear box	:	2 (two) nos.
Speed ratio	:	35.6:1
Hold back unit	:	Fitted at intermediate shaft.
Oil grade	:	Servo mesh - SP220

**4. Gear coupling:** : GC-10 [2 (two) nos.]  
(Fitted between Motor & Gear Box input)

## **5. Belts:-**

Length	:	1256 m
Width	:	1400 mm
Strength	:	1000/5 ply, 8 mm top, 4 mm bottom
Grade	:	M-24
Duty	:	Heavy, Nylon-Nylon
Carcass thickness	:	7.0 mm
Troughing angle	:	30°
Speed	:	2.75 m/sec

## **6. Idler:-**

<b>No. of troughing idlers (TR-1)</b>	:	..... Nos.
Size of the idlers	:	□□□□□X490mm
Bearing no	:	.....
<b>No of return rollers (BR-1)</b>	:	..... nos
Size of the rollers	:	□□52.4X1600mm
Bearing no	:	.....

## **7. Idler's frame s:-**

No of troughing idler frames (BKT-1)	:	.....
No of return roller holding bracket	:	.....
No of return self alignment frames	:	.....

#### 4.1.10 H-206 CONVEYOR:

##### 1. Motor:-

Name	:	Marathon Motors
Type	:	3 Ø Squirrel Cage induction motor
Power	:	2 (two) nos. 150 kW
RPM	:	1480 rpm
Volt	:	3.3 kV

##### 2. Fluid coupling:-

Make	:	Pembril Model
:		<b>FCU-20</b>
Type	:	.....
Installed qty	:	2 (two) nos.
Oil Qty	:	<b>15 Ltr.</b>
Safety devices	:	FUSIBLE TRIP $145^0 \pm 5^0$ FUSIBLE PLUG $165^0 \pm 5^0$

##### 3. Gear box:-

Make	:	New Allen Berry Works
Type	:	C-138 / GS 125
Rating	:	220 kW
Inst. Qty of gear box	:	2 (two) nos.
Speed ratio	:	<b>35.6:1</b>
Hold back unit	:	Fitted at intermediate shaft.
Oil grade	:	Servo mesh - SP220

##### 4. Gear coupling: : GC-12 [2 (two) nos.]

**(Fitted between Motor & Gear Box input)**

##### 5. Belts:-

Length	:	1275 m
Width	:	1400 mm
Strength	:	1000/5 ply, 8 mm top, 4 mm bottom
Grade	:	M-24
Duty	:	Heavy, Nylon-Nylon
Carcass thickness	:	7.0 mm
Troughing angle	:	$30^0$
Speed	:	2.75 m/sec

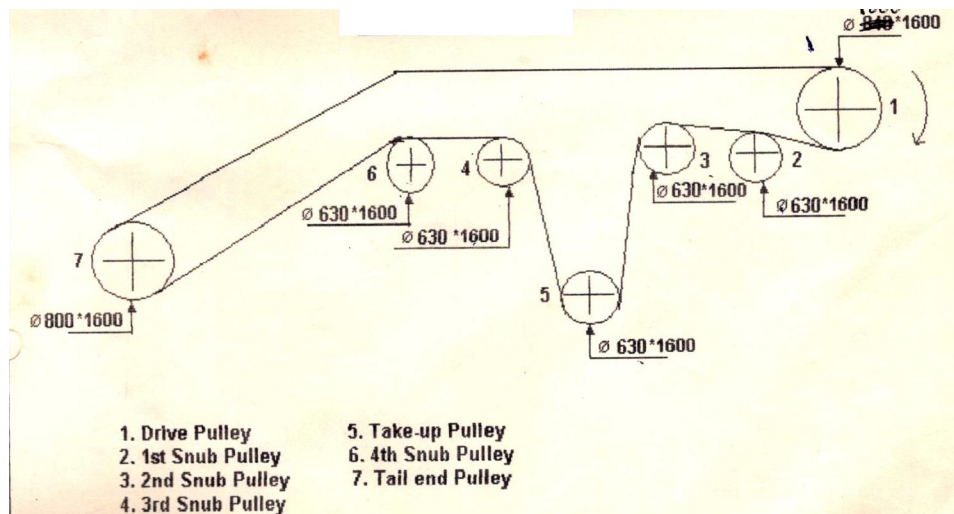
##### 6. Idler:-

<b>No. of troughing idlers (TR-1)</b>	:	..... Nos.
Size of the idlers	:	□□□□□X490mm
Bearing no	:	.....
<b>No of return rollers (BR-1)</b>	:	..... nos
Size of the rollers	:	□□52.4X1600mm
Bearing no	:	.....

##### 7. Idler's frame s:-

No of troughing idler frames (BKT-1)	:	.....
No of return roller holding bracket	:	.....
No of return self alignment frames	:	.....

#### 4.1.11 H-207 CONVEYOR:



##### 1. Motor:-

Name	:	Jyoti Ltd.
Type	:	3 Ø Squirrel Cage induction motor
Power	:	110 kW
RPM	:	1480 rpm
Volt	:	3.3 kV

##### 2. Fluid coupling:-

Make	:	Pembril Model
:	:	FCU-20
Type	:	Constant Fill Traction
Installed qty	:	1 (one) no.
Oil Qty	:	15 Ltr.
Oil Grade	:	
Safety devices	:	FUSIBLE TRIP $145^0 \pm 5^0$ FUSIBLE PLUG $165^0 \pm 5^0$

##### 3. Gear box:-

Make	:	New Allen Berry Works
Type	:	Helical
Rating	:	150 kW
Inst. Qty of gear box	:	1 (one) no.
Speed ratio	:	$1460/63.47 = 23:1$
Hold back unit	:	Fitted at intermediate shaft.
Oil grade	:	Servo mesh - SP220

##### 4. Gear coupling: : GC-10 (Fitted between Motor & Gear Box input)

##### 5. Belts:-

Length	:	270 m
Width	:	1400 mm
Strength	:	800/4 ply, 5 mm top, 3 mm bottom
Grade	:	M-24
Duty	:	Heavy, Nylon-Nylon
Carcass thickness	:	6.0 mm
Troughing angle	:	$30^0$

Speed : 2.75 m/sec

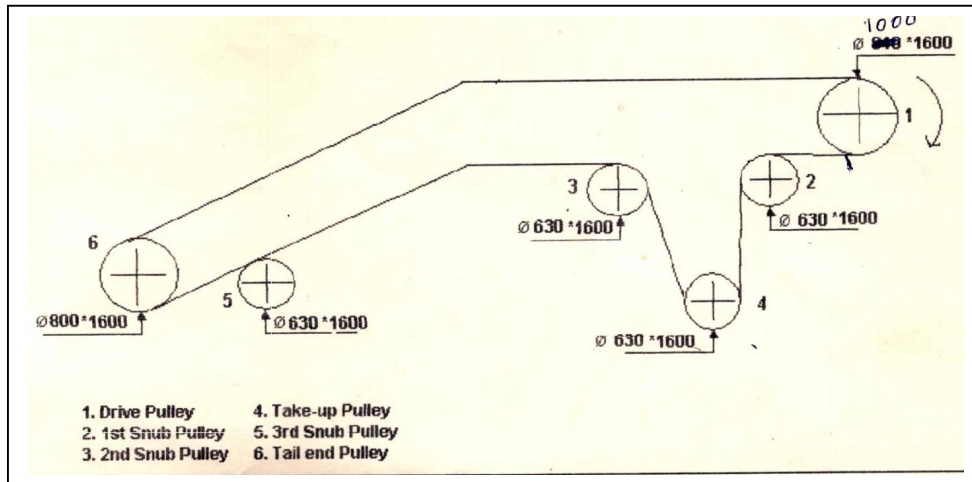
**6. Idler:-**

No. of troughing idlers (TR-1) : 399 nos.  
Size of the idlers : Ø152.4 mm x 490 mm  
Bearing no : BBIB 420206  
No of return rollers (BR-1) : 44 nos.  
Size of the rollers : Ø152.4 mm x 1600 mm  
Bearing no : BBIB 420206

**7. Idler's frame s:-**

No of troughing idler frames (BKT-1) : 133  
No of return roller holding bracket : 88  
No of return self alignment frames : 4

#### 4.1.12 H-208 CONVEYOR:



##### **1. Motor:-**

Name	:	Marathon Motors
Type	:	3 Ø Squirrel Cage induction motor
Power	:	150 kW
RPM	:	1480 rpm
Volt	:	3.3 kV

##### **2. Fluid coupling:-**

Make	:	Fluidomat
Model	:	T12/08
Type	:	Constant Fill Traction
Installed qty	:	1 (one) no.
Oil Qty	:	15 Ltr.
Oil Grade	:	SS 32
Safety devices	:	FUSIBLE TRIP $145^{0} \pm 5^{0}$ FUSIBLE PLUG $165^{0} \pm 5^{0}$

##### **3. Gear box:-**

Make	:	New Allen Berry Works
Type	:	Helical
Rating	:	150 kW
Inst. Qty of gear box	:	1 (one) no.
Speed ratio	:	$1460/63.47 = 23:1$
Hold back unit	:	Fitted at intermediate shaft.
Oil grade	:	Servo mesh - SP220

##### **4. Gear coupling:** : GC-10

(Fitted between Motor & Gear Box input)

##### **5. Belts:-**

Length	:	216 m
Width	:	1400 mm
Strength	:	800/4 ply, 5 mm top, 3 mm bottom
Grade	:	M-24
Duty	:	Heavy, Nylon-Nylon
Carcass thickness	:	6.0 mm

Troughing angle : 30°  
 Speed : 2.75 m/sec

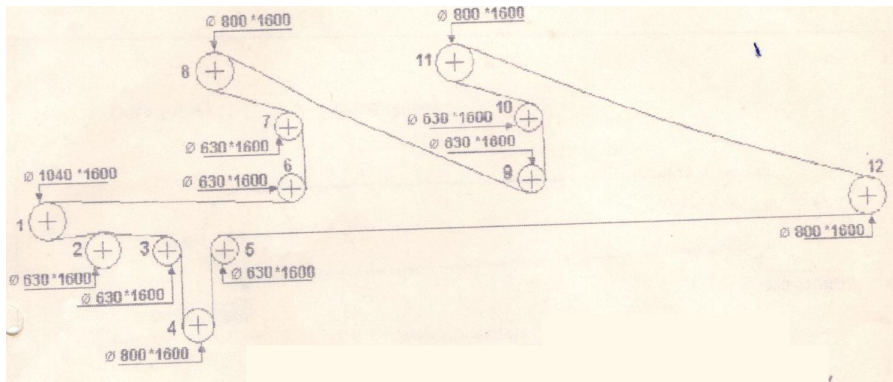
#### **6. Idler:-**

No. of troughing idlers (TR-1) : 264 nos.  
 Size of the idlers : Ø152.4 mm x 490 mm  
 Bearing no : BBIB 420206  
 No of return rollers (BR-1) : 33 nos.  
 Size of the rollers : Ø152.4 mm x 1600 mm  
 Bearing no : BBIB 420206

#### **7. Idler's frame s:-**

No of troughing idler frames (BKT-1) : 88  
 No of return roller holding bracket : 66  
 No of return self alignment frames : 3

### **4.1.13 H-209 CONVEYOR:**



#### **1. Motor:-**

Name : Marathon Motors  
 Type : 3 Ø Squirrel Cage induction motor  
 Power : 150 kW  
 RPM : 1480 rpm  
 Volt : 3.3 kV

#### **2. Fluid coupling:-**

Make : Fluidomat  
 Model : T12/08  
 Type : Constant Fill Traction  
 Installed qty : 1 (one) no.  
 Oil Qty : 15 Ltr.  
 Safety devices : FUSIBLE TRIP 145<sup>0</sup> ± 5<sup>0</sup>  
 FUSIBLE PLUG 165<sup>0</sup> ± 5<sup>0</sup>

#### **3. Gear box:-**

Make : New Allen Berry Works  
 Type : Helical  
 Rating : 150 kW  
 Inst. Qty of gear box : 1 (one) no.  
 Speed ratio : 1460/52.1 = 28:1

Maintenance Contract for Coal handling plant of Haldia Dock Complex, KoPT for 02 (Two) years

Oil grade : Servo mesh – SP220

**4. Gear coupling:** : GC-10  
(Fitted between Motor & Gear Box input)

**5. Belts:-**

Length : 446 m  
Width : 1400 mm  
Strength : 800/4 ply, 5 mm top, 3 mm bottom  
Grade : M-24  
Duty : Heavy, Nylon-Nylon  
Carcass thickness : 6.0 mm  
Troughing angle : 30°  
Speed : 2.75 m/sec

**6. Idler:-**

No. of Troughing Idlers (TR-1) : 561 nos.  
Size of the idlers : Ø152.4 mm x 490 mm  
Bearing no : BBIB 420206  
No. of Return Rollers (BR-1) : 72 nos.  
Size of the rollers : Ø152.4 mm x 1600 mm  
Bearing no : BBIB 420206

**7. Idler's frame s:-**

No of troughing idler frames (BKT-1) : 187  
No of return roller holding bracket : 144  
No of return self alignment frames : 4

**4.1.14 H-210 CONVEYOR:**

**1. Motor:-**

Name : Marathon Motors  
Type : 3 Ø Squirrel Cage inductions motor  
Power : 150 kW  
RPM : 1480 rpm  
Volt : 3.3 kV

**2. Fluid coupling:-**

Make : M/s PEMBRIL  
Model : FCU -20  
Type : constant fill.  
Installed qty : 01 no.  
Oil Grade : SERVO PRIME 46  
Safety devices : FUSIBLE TRIP  $145^{\circ} \pm 5^{\circ}\text{C}$   
FUSIBLE PLUG  $165^{\circ} \pm 5^{\circ}\text{C}$

**3. Gear box:-**

Make : New Allen Berry Works, Kolkata  
Type : Helical  
Inst. Qty of gear box : 1 No.

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Speed ratio : 28:1  
Oil : Servo Mesh SP220

**4. Idler/Roller & Frame:-**

No. of Troughing Idler : 558  
No. of Troughing Idler Frame (BKT1) : 186  
Size of Idler : Ø152.4 mm x 490 mm  
Bearing : BBIB 420206  
No. of Return Roller : 73  
No. of Return Roller Holding Bracket : 146  
Size of Return Roller : Ø152.4 mm x 1600 mm  
No. of Self-aligning Bracket : 3

**5. Lagging:-**

- 10 mm Thickness with diamond groove lagging for Drive pulley
- 10 mm Thickness with plain lagging for Non Drive pulley

**6. Belt :-**

Length : 458 m  
Width : 1400mm  
Strength : 800/4, Grade M-24, Nylon-Nylon  
5 mm Top Rubber / 3 mm Bottom  
Rubber  
Carcass Thickness : 6.0 mm  
Duty : Heavy  
Speed : 2.75 m/sec

**4.1.15 MASTER CONTROL & WAGON TIPPLER SUBSTATION:**

**a) Transformer details of Master Control Sub-station:**

SL NO	LOCATION	RATING OF TRANSFORMER (MVA/KVA)	O E M	INST. QTY	YEAR OF MANUFACTURE / INSTALLATION
1	Master Control Substation yard	6 MVA 33 KV/3.3 KV	GEC	3	1976
2	Master Control Substation Transformer	750 KVA 3.3 KV/415V	Bharat Bijalee / GEC	3	1976

**b) Transformer details of Wagon Tippler Sub-station:**

SL NO	LOCATION	RATING OF TRANSFORMER (MVA/KVA)	O E M	INST. QTY	YEAR OF MANUFACTURE /
1	Tippler Substation Transformer Room	750 KVA 3.3 KV/415V	Bharat Bijalee / GEC	4	1976

9	8	7	5	4	2	1	SL	CONVEYORS MACHINES
Long travel limit switches	Chute jamming preventor	Fluid therma l limit	Under Speed	HOOTER	BSS	PCS	ITEMS/ LOCATION	
2			2	1	4	4	SR-1	
2	1	2	2	1	6	6	SR-2	
2			2	1	4	4	SL-1	
2			2	1	4	4	SL-2	
	1		1	1		8	H-202	
	1		1	1		8	H-203	
	1		1	1		4	H-204	
	1		1	1		25	H-205	
	1		1	1		25	H-206	
	1		1	1		5	H-207	
	1		1	1		5	H-208	
	1		1	1		9	H-209	
	1		1	1		9	H-210	
8	10	2	17	13	18	116	TOTAL	

#### 4.1.16 TECHNICAL DETAILS OF PLC SYSTEM:

##### a) Automation drive details (VVVF):

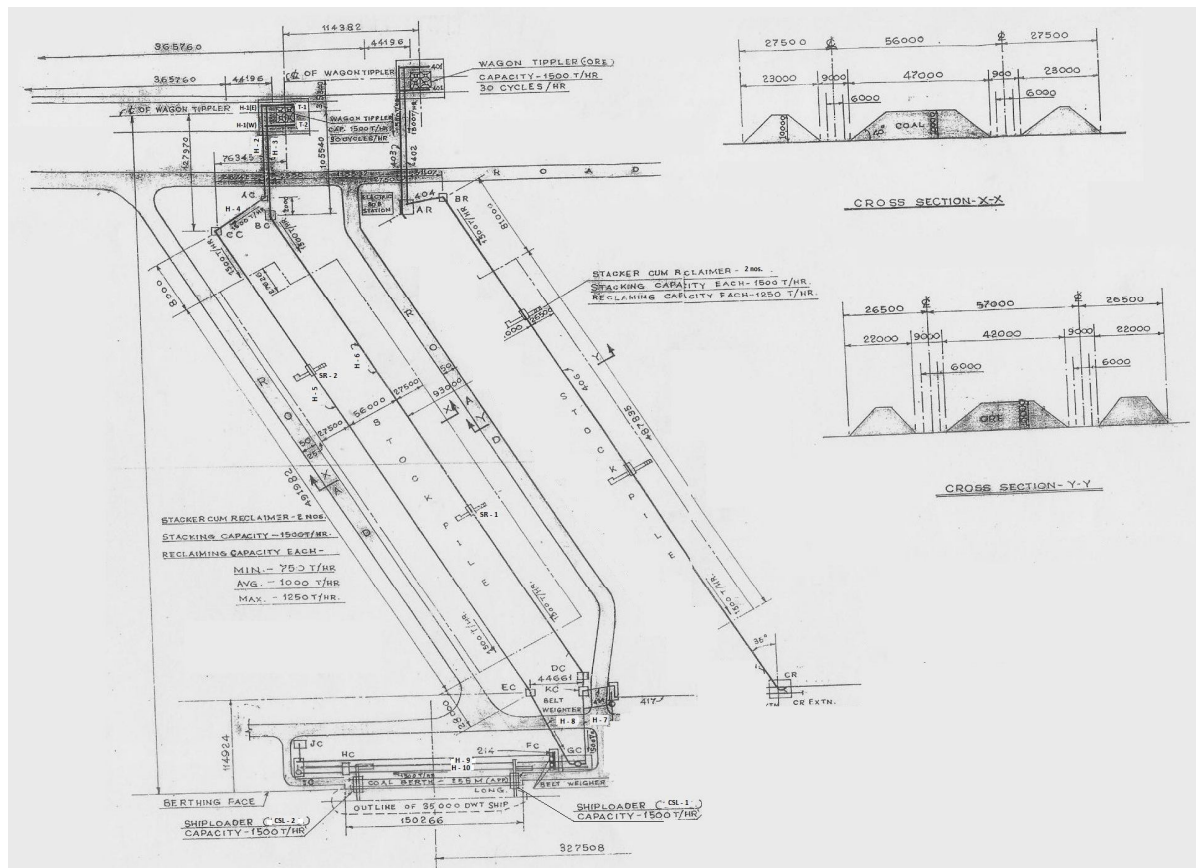
SI No.	DRIVE TYPE / DETAILS	LOCATION	OEM	RATING	INSTALLED YEAR	INSTALLED QTY.
1	CMIR 616 G5	SL-1	L&T Ltd./ Yaskawa	90 KW	2000	2
2	CMIR 616 G5	SL-1	L&T Ltd./ Yaskawa	300 KW	2000	1
3	CMIR-F7-A 4110	SL-2	L&T Ltd./ Yaskawa	110 KW	2008	2
4	CMIR-F7-A 4300	SL-2	L&T Ltd./ Yaskawa	300 KW	2008	1
5	Axpert-VT240S-30KW	SR-1	Ametch Electronic Pvt. Ltd.	30 KW	2015	1
6	ACS 800	SR-2	ABB Ltd.	110 KW	2016	1
7	CMIR-F7-A 4045	Wagon Tippler Vibro Feeder	Yaskawa	45 KW		2
8	Axpert Easy Series -110 KW	Wagon Tippler Apron Conv.	Ametch Electronic Pvt. Ltd.	110 KW	2014	1

##### b) Automation PLC details (Comprising of 3 Nos. PLC network):

SI. No	PLC TYPE / NO.	INSTALLED LOCATION	OEM	INSTALLED YEAR	TOTAL I/O
1	Modsoft / CPU 11302	SL-1	L&T Lts. / Schneider	2000	22
2	Unity Pro /	SL-2	Schneider	2008	23
3	CPU PM 583	SR-2	ABB Ltd.	2016	18

#### 4.1.17 BELT WEIGHING SYSTEM:

Type	Electronic, digital totaliser with indicator
Flow indicator	Digital type
Make	ACME AUTOMATION PVT. LTD.
Model Load Shell	ALSi41
Location	On Conv. No. H-209 & H-210
Material	Coal
Belt speed, m/sec	2.75
Belt width, mm	1400
Troughing angle, degree	30°
Accuracy	(minimum) $\pm 0.5$ over the range of 1500 MT/hr.
Total installed Qty.	2 Nos.



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#### 4.2 AIR CONDITIONING:

1. Stacker-cum-reclaimer No. 2:

Installed quantity : **4 (four) nos.** [3 (three) in **E-house** and **1 (one)** in **Operator Cabin**]

Make : **Voltas [Split type]**

Ton : **1.5**

2. Master Control Tower:

Installed quantity : **4 (four) nos.**

Make : **Voltas [Split type]**

Ton : **1.5**

#### 4.3 ILLUMINATION:

Description of Light	Trans. Tower 8 nos.	Conv. 13 nos.	High Mast Tower 9 nos.	Lattice type Lighting Tower 21 nos.	M/c (SR/SL) 4 nos.	Wagon Tippler House 1 no.	Office, Restroom, Canteen & Store	Total installed quantity
1 x 20 W Tube	-	-	-	-	-	-	30	30
1 x 40 W Tube	-	-	-	-	-	-	50	50
2 x 40 W Tube	-	-	-	-	-	-	400	400
1 x 70 W HPSV	-	-	-	-	30	-	-	120
1 x 125 W HPMV	-	-	-	-	-	200	-	200
1 x 250 W HPSV	-	6	-	-	-	-	-	78
1 x 400 W HPSV	4	-	-	-	-	42	-	74
2 x 400 W HPSV	-	-	32	10	6	-	-	522

#### 4.4 EOT CRANE WITH HOOK BLOCK:

Location	Make	Capacity	Span length	Quantity
Wagon Tippler House	Burn Standard	25 Ton	18 m	1 (one) no.

Drives : Long Travel / Main Hoist / Cross Travel

Long Travel Wheel fitted with Bearings : 4 (four) nos. [Bearing - 22226E]

Line Shaft Plummer Block with Bearings : 10 (ten) nos.

Cast Iron Rope Pulley fitted with Bush Bearing:

---

Fire Fighting system at HOJ-I&II, Barge Jetty-I&II and Outer Terminal-2(OT-II) of HDC

10 3/16" OD x 2" Bore x 10 1/4" PCD x 2" Pin Dia. - 1 (one) no.  
18 1/4" OD x 2 3/4" Bore x 17" PCD x 2 3/4" Pin Dia. - 2 (two) nos.  
18 1/4" OD x 4 1/4" Bore x 17" PCD x 4 1/4" Pin Dia. - 4 (four) nos.

Main Hoist Brake Unit:

Size : Ø400 mm x 140 mm Width  
Type : Electro Hydraulic Thruster (34 kg)

Coupling:

Main Hoist : Pin Bush type  
Cross Travel : Pin Bush type

Main Hoist Winch Drum : 1 (one) no. [fitted with Plummer Block and Bearing at both ends]

Main Hoist Wire Rope:

20 mm Dia. / 6 x 36 Construction / FMC / 1,770 N/mm<sup>2</sup> / 250 meter Length / RHO / Both End Free / Galvanized

**4.5 COMMUNICATION FACILITY, VHF COMMUNICATION, INTERCOM, ETC.:**

**VHF COMMUNICATION:**

Basically, the VHF systems are used for communication purpose, at different locations of the plant, for smooth operation and maintenance of the plant.

The following 2 (two) types of VHF Set are presently in use:

- i) Fixed Station (Base Station) [Make: Simoco] - 4 (four) nos.
- ii) Hand Set (RL328 Series) [Make: Rexion] - 24 (twenty-four) nos.

**4.6 CLEANLINESS / HOUSEKEEPING:**

**4.6.1 GRASS AND BUSH CUTTING DETAILS:**

- 1) Feeder lines, drainage system (including surrounding area of Coal Wagon Tiplers).
- 2) Rear side of Track Lines of H-205 & H-206 Yard Conveyors.
- 3) Tippler side of Plot Nos. 1 & 4.
- 4) Empty lines of Coal Wagon Tiplers.
- 5) All Transfer Tower surrounding areas.
- 6) Back-up areas of Berth No. 4, which are not included above.

## **SECTION- VII**

### **SCOPE OF WORK**

#### **Preamble:**

1. Maintenance of complete Mechanized Coal Handling Plant consisting of 2 Nos Wagon Tippers, 2 Nos of Stacker cum Re-claimers and 2 Nos of Ship loaders, connected Conveyor system and master control & tippler substation, control tower, fire-fighting system, communication system, including all associated machineries, excluding the repairing & joining of Conveyor belt & 33 KV unit of sub-station at Master Control. Brief scope of work is given below:
2. **Manpower:** The contractor will have to deploy qualified & experienced manpower as stated in **Annexure-B**. However, in case of exigency / breakdown, the contractor may have to deploy additional manpower at no extra cost to HDC.
3. **Consumables:** The contractor will have to supply all consumable items required for carrying out the maintenance of the plant. A tentative list of such items are shown in **Annexure-A**, which is only indicative and not exhaustive.
4. **Equipment:** The Contractor shall provide one number Hydra (min 14T capacity) at site during contract period with operator, fuel and maintenance. However, the contractor shall provide additional equipment, if required at site during any exigency/ break down, at no extra cost to HDC. The details of list of equipment and machineries are enclosed in '**Annexure-C**'.
5. **Sub-station:** Maintenance of 3.3 KV sub-stations at master control and wagon tippler to be carried out by the contractor.
6. **Illumination:** Maintenance of illumination at CHP is under the scope of work of the contractor, excluding maintenance of high mast & lattice tower.
7. **Availability:** The contractor shall ensure minimum availability of 90% of the Mechanized handling system based on requirement for loading and unloading to be calculated on monthly basis. However, in case of failure to achieve the minimum availability, compensation will be applicable as per **Annexure-D**.
8. **Trouble shooting:** The contractor will have to make close co-ordination with the operational shift in-charge for day to day trouble shooting of machineries/ components immediately. They will also have to follow shift wise operational log-book records to find out operational problems and resolve the same immediately. For trouble shooting during shift operation, the shift in-charge will place a requisition slip to the contractor, which should be certified after completion of the job. All such certified requisition slips to be submitted along with monthly bills by the contractor.
9. **Schedule Maintenance:** The Contractor will have to prepare maintenance schedule and get the same approved by HDC. Schedule maintenance including checking and lubrication to be carried out by the contractor on regular basis. Certified report of execution of maintenance schedule are to be submitted along with monthly bills by the contractor.

- 10. Preventive maintenance:** The Contractor will have to prepare preventive maintenance schedule and get the same approved by HDC. Damaged / worn-out spare parts to be replaced by the contractor well in advance to avoid all kinds of breakdown. Certified report of execution of preventive maintenance documents are to be submitted along with monthly bills by the contractor.
- 11. Condition based Maintenance :** The Contractor will have to arrange for instruments required for condition monitoring of the machineries and prepare report of health of the machine / equipment as per approved Schedule. Certified reports of execution of condition based maintenance are to be submitted along with monthly bills by the contractor.
- 12. Breakdown Maintenance :** In case of any breakdown of any equipment/ components/ machineries, the contractor should immediately mobilize his man power, equipment, required materials, spare parts, tools & tackles etc. for commissioning of the same. Certified reports of execution of break down maintenance are to be submitted along with monthly bills by the contractor.
- 13. Utilization of idle time of the plant:** The contractor should make close co-ordination with the section in charge to identify idle time due to non-availability of ship or wagon. All major maintenance/ replacement of spare parts / components to be made taking opportunity of such idle time.
- 14. Electronic items:** The contractor shall repair of electronic items like VHF set, walkie-talkie etc. for effective communication.
- 15. Basic Facilities:** HDC will provide power & water supply for maintenance work free of cost. However, space for office & store and power & water supply for office & store would be chargeable as per prevailing rate at HDC.
- 16. Assessment of spare parts:** The contractor will have to arrange for assessment of spare parts requirement along with representatives of HDC on monthly basis or as deemed necessary by HDC.
- 17. Supply of Spare Parts:** HDC will provide all kind of spare parts to the contractor. The contractor will replace the spare by deploying their manpower. In case of non-availability of spare in HDC's store, the contractor will supply the spares and get the cost of spares reimbursed with 6% service charge plus applicable GST. Prior permission from EIC is required for spare procurement by the contractor. However, the contractor will submit the bill duly certified by the HDC's representative.
- 18. Fitting of spare parts/ components:** Dismantling of old spare parts & components and re-fitting of new spare parts and components is in the scope of the contractor. Mechanical, hydraulic, electrical, electronic spare parts and components of wagon tippler, crusher, stacker cum re-claimer, ship loader, conveyor etc., irrespective of weight shape size and complexities, to be replaced by the contractor. The contractor should also be liable for proper fitting of the spare parts.
- 19. Engagement of OEMs:** The contractor will have to keep close co-ordination with OEM of various components and machineries of CHP. At least one visit per year of the OEMs to be

arranged by the contractor for health check-up of the respective components. In addition to this, in case of any failure of the contractor regarding instant trouble shooting of technical fault of the CHP, the contractor should immediately arrange for visit of the service engineer of the OEM to resolve the issue at his own risk, cost and arrangement.

**20. Tools & tackles:** The contractor will supply all kinds of tools and tackles and lifting appliances required for the seamless discharge of the instant contract liabilities.

**21. Load-test:** The contractor will arrange to carry out all kinds of load test of the equipment/ components/ lifting appliances as per requirement at his own risk, cost and arrangement.

**22. Gas cutting & welding related work:** Gas cutting & welding work, which is the most common process at CHP, to be carried out by the contractor for repair, maintenance, modification of components/ machineries during schedule, preventive and break down maintenance.

**23. Painting:** Wire brushing and Painting work may be assigned to the contractor time to time, for which paints will be supplied by HDC.

**24. Statutory Charges:** All kinds of statutory charges/ levies are to be paid by the contractor.

**25. Entry-pass:** The contractor will have to arrange the RFID gate pass for entering in to the Dock area for his personal at his cost and arrangement. The existing rate of RFID gate pass are enclosed as ‘Annexure-E’.

**26. Insurance:** The contractor shall arrange for insurance of his manpower and equipment deployed under the contract.

**27. Mobilization:** The mobilization period of the contract is 15 days. However, the contractor will arrange for mobilization within the shortest possible time from the date of placement of order. No mobilization charge would be paid by HDC.

**28. Contract Period:** The contract period is for two (02) years from the date of commencement of the work with a provision for one-year extension.

**29. Exclusion from the contractor’s scope:**

- i) Repair and maintenance of conveyor belt.
- ii) Civil maintenance of building, main roads, service roads & drains.
- iii) Lift, High mast & lattice towers.
- iv) Spillage cleaning related to cargo handling operation. However, the contractor shall have to clean the spillage for the maintenance work.
- v) All kinds of major structural repair/replacement work including supply of Steel materials.
- vi) Fire-fighting activities inside the plant.
- vii) Painting of entire equipment and heavy structural.
- viii) Maintenance of 33 KV sub-station at Master control.

## **A.**

### **1.1 Introduction about Haldia Dock Complex (HDC)**

#### **General**

- Haldia Dock Complex (HDC) is located near the confluence of river Hooghly and river Haldi, at Latitude 22° 2' N and Longitude 88° 6' E. HDC is situated on the East Coast in the State of West Bengal. HDC is a Satellite Port to the Major Port of Kolkata and is under the administrative control of Kolkata Port Trust (KoPT). HDC is 104 km downstream of Kolkata and 130 km upstream of Sandheads [45 km upstream from Pilotage Station, having an average pilotage time of 3 (three) hours]. The development of HDC was taken up in 1965. To start with, the First Oil Jetty, located on the river itself, was commissioned in 1968. The Second Oil Jetty, at its downstream, was commissioned in 1991. The Third Oil Jetty was commissioned in 2000. Since the river is tidal, with fluctuations in draft, HDC has been designed as an Impounded Basin, with a Lock Entrance. HDC consists of Berth No. 3, mechanized Berth No. 4 for handling Coal, mechanized Berth No. 4A, Berth No. 4B, multi-purpose Berth No. 5, Finger Jetty (Berth Nos. 6 & 7), Berth Nos. 8, 9, 10, 11 & 12, newly constructed multi-purpose Berth Nos. 2 & 13, two (2) riverine Barge Jetties and Haldia Anchorage for LASH vessels.

### **1.2 Introduction about the Mechanized Coal Handling Plant (MCHP)**

- The Mechanized Coal Handling Plant (MCHP) in HDC was commissioned in and around 1978. The Coal handling system broadly consists of (a) a Rail Receival System (RRS) [or Wagon Tippler House], with 2 (two) parallel Rotaside Wagon Tipplers, for unloading Wagons; (b) a stockpile with 2 (two) Yard Conveyors, having 1 (one) Rail-mounted Stacker-cum-reclaimer in each Yard Conveyor route; and (c) 2 (two) Shiploaders on the Wharf. The system can load 1 (one) vessel at a time. While the capacity of each Wagon Tippler (WT) is 750 TPH, the capacity of each Stacker-cum-reclaimer (SCR) as well as Shiploader (SL) is 1,500 TPH and the annual design plant capacity is around 3.5 Million Tonnes.

1.3 **Brief details  
about the project**

HDC intends to outsource Maintenance of the MCHP to a resourceful outside agency, with sufficient expertise in the field. The main objectives of the work of Maintenance of the MCHP of HDC are underlined below:

- i) To ensure efficient, safe and reliable Maintenance of the plant.
- ii) To ensure high availability of the plant, in a consistent manner.

Therefore, this contract will be an outcome-based service agreement, vesting responsibility on the successful bidder (Contractor) to achieve the desired level of performance.

1.4 **Contractor's  
personnel with respect  
to physical execution  
of the contract at site  
level**

- The Contractor shall ensure that all the required personnel/resources are available at the time of handing over, so as to be able to appropriately take over and commence the intended services in relation to each system and equipment.

- The Contractor may authorize their personnel for the day-to-day activities [like maintaining log books, registers, keeping various records, receiving material from HDC, signing **Hindrance Register** (to be maintained at site), etc.], in connection with execution of the contract, at site level. **Signature of such persons should be attested by an authorized official/representative of the Contractor.** The Engineer-in-charge (EIC) of HDC should be notified in advance, accordingly. However, for the activities related to receiving materials from HDC, Sub-contractor's personnel will not be allowed to act as such authorized representative.

- The Contractor shall have to issue **Photo Identity Cards** to all the personnel, workmen [including the personnel of Sub-contractor(s)] to be engaged by them for this work. These identity cards should bear the **signature of the personnel, name of the company** [in case of Sub-contractor's employee, name of the sub-contracting company should also be mentioned], **period of validity** and a **photo of the personnel** attached on it. Such photo identity cards should be laminated, after due attestation by an **authorized official/representative of the Contractor**.

The Contractor shall have to submit photocopies of such photo identity cards along with a list of personnel, duly signed by an **authorized official/representative of the Contractor**. In case of any change in the said list, the same should be intimated [including submission of photocopy of the photo identity card for the new addition] immediately to the Engineer-in-charge.

The Contractor shall have to submit a consolidated list of personnel/workmen [indicating their designation, educational qualification, name of the concerned Sub-contractor (if applicable), applicability of EPF & ESI, etc.], related to the instant contract work, at the beginning of each calendar month.

1.5 **Broad scope  
of Maintenance of the**

- The scope of the Contractor shall cover the following broad functional activities:

- 1.5..1 Maintenance of the main system of the plant, consisting of-
  - i) Wagon Tippers, including MMD Sizer, Apron Feeders, Vibro-feeders, Grizzly, associated Tippler Conveyors, etc.
  - ii) Stacker-cum-reclaimers [2 (two) nos.] and Shiploaders [2 (two) nos.].
  - iii) PLC network of 1 (one) Stacker-cum-reclaimer and 2 (two) Shiploaders.
  - iv) VVVF Drives.
  - v) Conveyor system.
  - vi) Transfer Towers, Drive Houses/Towers, etc.
  - vii) Belt Weigher systems.
  - viii) Air-conditioning system of machines, as applicable.
  - ix) All safety devices, field devices and monitoring devices in the plant.
  - x) Cable networking (HT, LT, Control & Communication) of the plant.
- 1.5..2 Maintenance of the auxiliary system of the plant, consisting of all types of Water Pumps related to MCHP.
- 1.5..3 For Maintenance and shifting of materials one place to another a hydra crane minimum 14 ton capacity must be provided by the contractor. All other materials handling equipment will be provided by HDC.
- 1.5..4 Maintenance of EOT Crane, Hoists, Electrical Hoists of the plant.
- 1.5..5 Maintenance of communication facility, such as Walkie Talkies, VHF Fixed Stations, etc. [\* Note: HDC presently has 24 (twenty-four) Walkie Talkies and 4 (four) VHF Fixed Stations and has Licence for the same. The said equipment would be handed over to the Contractor during handing over/taking over. Renewal of Licence, from time to time, would be undertaken by HDC.]
- 1.5..6 Maintenance of the entire illumination system of the plant, excluding High Mast as well as Lattice-type Lighting Tower systems installed/fitted in different equipment/ areas viz.:
  - i) Conveyors and Conveyor Galleries.
  - ii) Transfer Towers and Drive Houses/Towers.

	<ul style="list-style-type: none"> <li>iii) Tunnels.</li> <li>iv) Wagon Tippler House.</li> <li>v) Sub-station lighting (Indoor &amp; Outdoor).</li> <li>vi) Stacker-cum-reclaimers.</li> <li>vii) Shiploaders.</li> <li>viii) Workshop.</li> <li>ix) Road from Wagon Tippler to Master Control Tower.</li> <li>x) Jetty and the adjoining areas.</li> <li>xi) All other working as well as non-working areas falling under the operational purview of the MCHP.</li> </ul> <p>1.5..7 All other works, facilities and services required for successfully achieving the objectives of Maintenance of the plant and other obligations of the contract are included in the scope of work.</p>
<p>1.6                    <b>Exclusions from the Maintenance contract</b></p>	<p>The following activities are excluded from the scope of work/services of the Contractor:</p> <ul style="list-style-type: none"> <li>i) Civil maintenance of buildings, main roads, service roads and drains.</li> <li>ii) Maintenance of fire-fighting water lines.</li> <li>iii) Conveyor belts repair &amp; maintenance.</li> <li>iv) All kind of spares of plant and machineries.</li> <li>v) Spillage cleaning related to cargo handling operation. However, the contractor shall have to clean the spillage for the maintenance work.</li> <li>vi) All kind of major structural repair / replacement work including supply of steel materials.</li> </ul>
<p>1.7                    <b>Services during the mobilization period</b></p>	<ul style="list-style-type: none"> <li>• A <b>maximum</b> period of <b>15 (Fifteen) days</b>, from the date of placement of Letter of Intent (LoI)/Letter of Award (LoA), will be allowed as <b>mobilization period</b>, prior to handing over the plant Maintenance by HDC and taking over the plant for Maintenance by the Contractor. <b>No mobilization advance is applicable.</b></li> </ul> <p>Services during the mobilization period will include the following:</p> <p>1.7..1 <b><u>Establishment:</u></b></p> <p>1.7..1.1 The Contractor shall set up their establishment (such as office and office facilities) and initiate related activities for taking over the plant and equipment for Maintenance, within the stipulated time period.</p>

1.7..1.2 The Contractor shall nominate a "Contractor's Representative" as the overall in-charge for the contract, to ensure that all the obligations under the contract are discharged smoothly. The Contractor's Representative shall be authorized and empowered by the Contractor on all matters concerning this contract. In all such matters, the Contractor shall be bound by the communications, directions, requests and decisions issued in writing by the Contractor's Representative.

The Contractor's Representative will co-ordinate with the "Engineer-in-charge" (EIC) of HDC in all matters relating to performance of the services under the contract.

**1.7..2 Preliminary works for smooth handing over and taking over of the plant:**

1.7..2.1 The handing over and taking over process includes joint inspection of the plant, equipment, systems etc. by the representatives of HDC and the Contractor. The joint inspection report shall contain the condition and status of the plant, equipment, systems etc., with specific comments on the detected visual abnormalities, if any.

These reports/documents will be treated as the base level documents for effecting proper Maintenance planning and monitoring. HDC may provide all available drawings, manuals, past maintenance records (including major failures), test records, log books, etc. to the Contractor, if felt necessary, on request, subject to the availability & discretion of the "Engineer". This will not be an obligation of the HDC.

1.7..2.2 Development of formats, schedules and procedures acceptable to the EIC, during the term of the contract, for reporting feedback, status of Maintenance activities as well as maintaining records, log books, etc. shall be the responsibility of the Contractor.

**1.8 Standards of performance of services**

- The services shall be performed in accordance with the express and implied standards, including, but not limited to, the following:
  - i) The provisions of this contract.

1.9                      **Services  
during the tenure of  
the contract**

- ii) Prudent utility practices.
- iii) All directives.
- iv) Compliance with Dock Safety regulations with respect to the tools and tackles to be maintained by the contractor and all relevant orders & directives of HDC as well as regulating authorities viz. Dock Safety Inspector or any Govt. authority, appointed under any law, from time to time.
- v) Compliance with statutes, regulations, etc.
- vi) Compliance with the provisions of the Major Port Trust Act, 1963, as amended, from time to time, by laws, rules & regulations made thereunder, any administrative or other directions given under the said Act and all other statutory enactment in relation to Maintenance of the MCHP.

- The Contractor shall agree and undertake not to use the plant and the MCHP site for any purpose other than for the work or any other designated purposes specified in the contract, without obtaining prior written consent from HDC.

• **General:**

1.9..1 **Contractor's personnel**

- i) "Contractor's Personnel" means the Managers, Engineers, Supervisors, Technicians and other personnel, including labours, to be provided and deployed by the Contractor, for smooth Operation & Maintenance of the plant.
- ii) The Contractor must engage appropriately trained, qualified and experienced staff for smooth, safe and trouble-free maintenance of the machine/equipment/ system, as applicable. The core personnel of the Contractor, including Engineers, so deployed, must have adequate qualification and experience in their respective fields, such as assembly and sub-assembly of the machine/system/equipment, Electrical Circuit of Electrical Power/Control System, PLC and VVVF Drives (Automation System), maintenance of HT/LT equipment (other than substation), lighting system, earthing system, Hydraulic system etc., preferably in mechanized bulk material handling plant and are in a position to rectify any defects developed during operation of the plant, with minimum downtime.
- iii) The Contractor shall deploy adequate workmen, such as Mechanic, Electrician, Fitter, etc., so as to discharge all the

obligations under the contract during the contract period. In emergency situations, the Contractor shall plan and make arrangements and bear all the costs associated with such arrangements for ensuring the presence of staff on-site for uninterrupted maintenance of the plant.

- iv) Where HDC reasonably determines that the Contractor has not employed the required resources at the plant for the services, then HDC shall have the right to ask the Contractor to arrange for such resources. In case the Contractor does not respond reasonably within 8 (eight) hours from the receipt of HDC's request, HDC shall have the right to arrange for such resources at the cost of the Contractor.
- v) Minimum deployment pattern is given in Annexure- 'B'. However, in case of exigency of the work, the contractor will have to arrange for adequate manpower at no extra cost to HDC.
- vi) The Contractor must disengage immediately the concerned workmen, in case of indiscipline, misconduct, negligence in duty, suppression of facts, deliberate mishandling of machine & equipment, sabotage, professional incompetency, etc. and replace such workmen, with due intimation to HDC.
- vii) Any damage, caused by the workmen engaged by the Contractor, to any machinery or equipment or installation of HDC, due to negligence, ignorance or malafide intention, shall be made good at the cost of the Contractor, within a reasonable period of time acceptable to HDC, failing which, the cost of the damages assessed by HDC shall be deducted from the bill of the Contractor or any money due to the Contractor.
- viii) All individuals engaged in performance of the Contractor's obligations, under this contract, shall be the employees of the Contractor and their working hours, rates of compensation and all other matters relating to their employment shall be determined solely by the Contractor, in accordance with the applicable laws and regulations. The Contractor shall be solely responsible for

employment policies that specify the requirements for staff working under him and such policies are to be consistent and in conjunction with the existing applicable labour laws and any government directives applicable on HDC.

ix) During the tenure of the contract, if the Contractor intends to induct new work men or make alterations in their grade, the Contractor shall communicate the same for appraisal of HDC.

1.9..2 The Contractor shall employ adequate engineer and/or supervisor for shift and general shift for overall co-ordination of the plant, who will oversee and be responsible for all maintenance.

1.9..3 Tools & tackles, special tools & tackles, testing equipment, consumables, scaffolding, etc., required for maintenance, shall be arranged by the Contractor. However, tools & tackles available with HDC shall be handed over to the Contractor for use. At the time of contract closure, these tools & tackles shall be returned back to HDC by the Contractor in proper usable condition.

1.9..4 The Contractor shall observe all applicable regulations regarding safety of men and machines.

1.9..5 Authority for access: No persons other than personnel of the Contractor [and Sub-contractor(s) approved by HDC, if any] shall be allowed on the plant premises, except with the consent of HDC. The personnel of the Contractor [and Sub-contractor(s) approved by HDC, if any] must possess proper identity card having their photographs. The Contractor shall grant access to all plant related data, records, reports and software that is being generated or used as part of its services for the plant, for verification of HDC. All such data shall be the property of HDC and shall not be used by the Contractor for any purposes other than contractual requirements. Use of such information for any other purpose by the Contractor is strictly prohibited.

1.9..6 Routine interaction with the authorized representative(s) of HDC, regarding plant maintenance, shall be held every day or as may be desired by HDC.

1.9..7 The Maintenance activities shall be reviewed/discussed weekly in the site meeting to plan the further maintenance requirements, which will be presided over by the EIC or any other authorized representative of HDC.

1.9..8 HDC shall conduct inspections/audit of the plant, at any time, to check the health of the plant and maintenance followed by the Contractor. The Contractor shall provide all necessary assistance/documents for such inspections/audit, as may be desired by HDC. Non-conformance(s) observed during such inspections/audit shall have to be complied with by the Contractor within the mutually agreed time frame, failing which, HDC shall have the right to make good such non-conformance(s) at the Contractor's risk and cost.

1.9..9 The Contractor shall notify HDC promptly regarding the occurrence of any emergency situation and take quick action to prevent any threatened damage, injury or loss to the plant or persons or property inside the plant.

• **Maintenance:**

1.9..1 The plant will have to be maintained on a 2 (two) shifts and 1 general shift basis for 365 days in a year. The normal operational shift timings are as follows:

- 1<sup>st</sup> Shift - 0600 hrs. to 1400 hrs.
- 2<sup>nd</sup> Shift - 1400 hrs. to 2200 hrs.
- 3<sup>rd</sup> Shift - 2200 hrs. to 0600 hrs.

Arrival and departure of staff should be well-planned, to up-keep maintenance requirements, intact, round the clock.

1.9..2 **Indicative manpower:**

The manpower required to be deployed as shown in Annex - B is only indicative minimum and not limited. The contractor is required to study and deploy optimum man power to ensure the availability of machineries as mentioned.

1.9..3 **Indicative Consumables:**

The consumables (electrical & mechanical) required to be provided as shown in **Annex - C** is only indicative minimum and not limited. The contractor is required to study and supply required consumable to ensure the availability of machineries as mentioned.

1.9..4 **Assessment of Spare requirement:** The contractor will have to carry out joint inspection, time to time, with the section in-charge to make assessment of spare parts required for replacement.

1.9..5 Maintenance of the plant primarily aims at keeping the plant & equipment, under the scope of the Contractor, in efficient and reliable operating conditions, minimizing downtime during operation, so as to ensure their maximum availability and productivity.

1.9..6 The Contractor's scope covers deployment of different maintenance teams - comprising Engineers, Supervisors, Technicians, skilled/ semiskilled workmen - for efficient and effective preventive, predictive and corrective maintenance during the tenure of the contract.

1.9..7 The Contractor shall carry out the maintenance activities to prevent failures and also execute improvement activities/repair activities to prolong equipment life, reduce maintenance hours, in order to ensure maximum availability of the system and equipment, optimizing productivity.

1.9..8 The Contractor shall follow the maintenance practices/activities as under:

Generally, there are 2 (two) types of maintenance in use:

a) Preventive Maintenance:

- The care and servicing, for the purpose of maintaining the systems and equipment in satisfactory operating conditions, by providing systematic inspection, detection and correction of incipient failures, either before they occur or before they develop into major defects.
- Maintenance, including tests, measurements, calibration and part/component replacement, performed specially to prevent occurrence of faults/failures.

b) Corrective (Unscheduled) Maintenance:

- Maintenance which is required when an item has failed or worn out, to bring it back to working order.

Preventive Maintenance:

Preventive Maintenance can be divided into the following sub-groups:

• Planned/Scheduled Maintenance (PM/SM):

Maintenance activities to be done as per schedule or plan (Preventive Maintenance Schedule) which may be related to time like Daily/Weekly/Monthly/Quarterly/Half Yearly/Yearly basis and so on or equipment running

hours or other parameters as per recommendation of OEM with prior approval of HDC. Besides, the PMS shall be reviewed and modified, taking into account the aging of systems/machinery/ equipment, operational conditions (environment) and operational requirement, etc.

- Conditioned Based Maintenance (CBM):

Maintenance activities to be done when need arises. CBM is based on using real time data to prioritize and optimize the maintenance resources. This is achieved by observing the state of the system, known as condition monitoring, by extensive instrumentation of equipment and together with better tools for analyzing condition data. Such a system will determine the health of equipment and act only when maintenance is actually necessary. Ideally, CBM will allow the maintenance personnel to do only the right things, minimizing cost of spare parts, system downtime and time spent on maintenance. CBM is aimed at avoiding unnecessary shutdowns and increase availability of equipment.

Another variant of preventive maintenance is Predictive Maintenance, which tends to do maintenance activities, in time, by regular observation of the operation of systems/ machines/equipment. The contractor should scrutiny operation log-book and arrange for joint inspection in this regard.

CBM, together with planned maintenance, comprises preventive maintenance, in which maintenance event is pre-planned and all future maintenance is pre-programmed. The effectiveness of a preventive maintenance schedule depends on the Reliability Centered Maintenance (RCM) analysis. RCM enables to monitor, assess, predict and understand the working of the assets i.e. plant. RCM shall be implemented to create a cost effective maintenance strategy, to address dominant causes of equipment failure and it is a systematic approach in defining a routine maintenance programme, composed of cost-effective tasks that preserve important functions in a defined operating context for systems/machinery/equipment. RCM emphasizes the use of predictive techniques, in addition to traditional preventive measures.

### **Corrective/Un-scheduled Maintenance:**

During operation, abnormalities/defects/faults are observed and in some cases, failure of components occur, resulting in breakdown of plant or equipment. Corrective Maintenance is a maintenance activity to identify, isolate and rectify a fault, so that the failed component/equipment/machine or system can be restored to an operational condition, within the tolerances or limits, by repairing or otherwise by replacement.

Corrective Maintenance can be divided into the following sub-groups:

- Immediate Corrective Maintenance (Breakdown Maintenance):

Work starts immediately after failure. It signifies repair work, which is to be carried out after the failure of the equipment in service, to restore it to its working condition and unlike other maintenance, cannot be given careful advance planning.

- Deferred Corrective Maintenance (Post-fault Maintenance):

Works which can be delayed, in conformation to a given set of maintenance rules, depending on the nature of abnormalities /defects/faults and its effect on operation.

1.9..9 Based on the maintenance practices mentioned above, following are the gist of maintenance to be adopted by the Contractor:

- The Contractor shall take up Mechanical maintenance, Electrical maintenance, Automation maintenance, Hydraulic maintenance etc. of different systems, machines and equipment, by using predictive maintenance techniques, in addition to traditional preventive measures, so as to maintain the plant in efficient and reliable manner, with an objective to increase plant uptime and productivity.
- The Contractor shall prepare a routine maintenance plan and ensure timely maintenance of the systems, machines and equipment, as per the plan. While deciding on the schedule maintenance plan (PMS), the respective manufacturer's recommendations should be followed and aging of the plant as well as the operational conditions are also to be considered. However, the schedule may be reviewed and amended, from time to time, if necessary and in consultation with the EIC,

with a view to make it more appropriate to meet the site needs.

- During the mobilization period, the Contractor shall submit to the EIC, the PMS for equipment, machines and system, etc., under his scope, which are to be carried out in this contract, for approval. The same is to be approved by HDC, with corrections, if any, and to be returned to the Contractor within 30 (thirty) days from the date of receipt of format. The maintenance activities shall be carried out as per the approved PMS.
- The Contractor shall prepare and implement long term maintenance, major maintenance and overhaul schedules. The Contractor shall be responsible for any additional resources, as may be necessary, for all major overhauls, shutdowns and other repairs/replacements.
- Planning of maintenance work as to what jobs are to be done, how they are to be carried out (determining the best method of carrying out the work), when they should be taken up and the various resources required to execute the work, shall be done by the Contractor, in close co-ordination with HDC.

The maintenance planning shall be made on the basis of:

- Routine Maintenance Plan [Preventive Maintenance Schedule (PMS)]
  - Pending scheduled activities
  - Observations made during execution of PMS
  - Observations made during operation
  - Condition monitoring
  - Observations of HDC inspections
  - Observations of OEM experts
  - Any additional works/requirements
- For undertaking major maintenance activities, planning shall have to be done by the Contractor in advance and in consultation with the EIC, so as to make the best use of the idle period. The Contractor shall properly plan for execution of maintenance activities during non-operational time of systems/equipment.
- Routine inspection & condition monitoring:

Inspection of all equipment shall be carried out by the Contractor, in accordance with maintenance manual(s) of the individual equipment/OEM's recommendations. Before and after operation of the plant, the Contractor shall carry out careful and detailed

inspection of all equipment and its components. An effective maintenance practice should include Condition Monitoring and assessment, along with visual inspection. Effective monitoring of such information and intelligent analysis of the same can provide valuable information on the condition of the equipment and can avoid failure while in operation. Most of the tasks associated with Condition Monitoring are generally carried out while the equipment is in service or when the equipment is shut down for some other reason.

The Contractor shall prepare a check list, in order to ensure correct and proper inspection. Inspection and condition monitoring shall also include use of inspection equipment and testing devices, at the cost of the Contractor, to determine the extent of defect.

Action shall be taken on the observations during inspection and condition monitoring.

o Periodic inspection through OEM:

The Contractor shall have to arrange for periodic inspection of all specialized equipment, i.e. Control & Automation systems (viz. PLC and VVVF Drives) and Hydraulic systems, at least once in a year, by the OEM's (i.e. manufacturer's) expert(s), to assess the health of the systems and make suitable recommendations to maintain the reliability of the system. However, the first OEM inspection of all specialized systems, mentioned here above, must be arranged during the first 6 (six) months of award of contract. The cost of such inspections, to be conducted by the expert(s), shall have to be borne by the Contractor, without any additional financial liability to HDC. A copy of the inspection report and action plan thereof, along with replacement policy of spares, shall be forwarded by the Contractor to the EIC for reference and monitoring of implementation of such recommendations. However, HDC reserves the right to have independent audits of the health of the systems and equipment by OEMs at the cost of the Contractor and the Contractor shall implement the findings of such audits in a mutually agreed schedule. During OEM's visit, contractor will arrange for a joint inspection of HDC's representative, contractor's representative and OEM's representative.

In the event of non-existence of the OEM for a

particular specialized system, the Contractor have to propose name(s) of alternate agency(ies) for the purpose, for approval of HDC.

- Lubrication:

Lubrication is an important activity in the system of maintenance. The Contractor shall prepare and implement the lubrication schedule, as per the approved maintenance plan, for all equipment in the MCHP. The Contractor shall supply all types of lubricants recommended by the respective equipment manufacturer. A well-conceived lubrication schedule should include its application by the right method, at proper frequency, storage, handling and identification.

- The contractor shall maintain all field devices, safety devices and monitoring devices in perfect working condition, functional all the time and set as per the designed parameters. In any circumstances, these settings, along with plant operational limits, shall not be tampered/modified. However, prompt action shall be taken to rectify the faults [for which the field devices, safety devices and monitoring devices are bypassed] and put the same back into services.

- Breakdown Maintenance:

During operation, if any fault/defect is appeared/observed once, the same shall be identified, isolated and rectified, so that the failed equipment, machine or system can be restored to an operational condition in a shortest possible time. However, defects which can be deferred for the regular periodic maintenance (provided it will not have any type of adverse effect on equipment, machine, or systems) shall be recorded and reported, in a suitable form, for follow up action.

Faults once observed shall be promptly attended and rectified to avoid major failures. In case it is not possible to rectify the faults/defects due to any constraints, alternate feasible temporary arrangement shall be made to restore the system and resume operation at the shortest possible time. The permanent measures shall be taken up thereafter in the next immediate operational gap. Also, if the services of any expert are required, the Contractor shall arrange the same in the most expeditious

manner at his own cost.

In the event of any breakdown maintenance, the Contractor shall put in his best effort to promptly attend the break down and bring the machine to an operating condition as early as possible. If necessary, the Contractor shall arrange and deploy more manpower and other resources to reduce the breakdown period.

In case of the opinion of the Contractor that the breakdown is not attributable to him, a joint inspection shall be conducted with HDC representative(s) to assess the cause of the failure. In case it is established that the failure is not due to negligence on the part of the Contractor, the cost of the materials/spares consumed for the repair and the cost of the expert shall be reimbursed by HDC, as per actual, on production of supporting documents. However, no cost shall be provided for the manpower engaged to execute the work.

- Overhauls/repairs of plant and equipment:

Overhauling, both major and minor repairing and replacement of components/equipment and systems & subsystems, are under the scope of the Contractor. The Contractor shall supplement the plant personnel with additional resources, as necessary, for all major overhauls, shutdowns and other repairs.

- Overhauling Maintenance:

The equipment or machines or systems, which are removed either due to defective/breakdown condition or as per schedule planning, shall be overhauled with replacement of defective/worn out/aging components and kept as standby spares for future requirement. Besides, the overhauled items shall be tested, if required, to ascertain its performance, so that it can be used whenever required. The overhauled equipment shall be preserved, as per proper Engineering standard. The overhauled components are to be kept properly, with proper lubrication. The Contractor shall avoid overhauling of equipment in-situ.

- Modification/Improvement Maintenance:

During the course of the contract, the Contractor may take up improvement/

modification activities, to avoid repeated nature of breakdown of a particular component, to facilitate easy maintenance, operational convenience and to bring more reliability and efficiency of machines/equipment/systems, at his cost, without compromising with the basic design, operational logic, characteristics, and safety aspect, under intimation to the EIC of HDC.

o Electrical maintenance:

All Electrical maintenance work is included in the scope of the Contractor. However, with respect to Master Control Sub-station (MCSS) and Tippler Sub-station (TSS) equipment, maintenance of only the Breakers related to MCHP, installed in the said Sub-stations, is included in the scope of the Contractor. Maintenance of the main Power Transformers of the said Sub-stations is not included in the scope of the Contractor.

• Maintenance of Earthing system:

Earthing system is provided for Sub-stations, Machines, Rail Tracks, Conveyor Structural and Control system, keeping suitable earth resistance value.

Maintenance will be referred to as the monthly, quarterly, bi-annual or annual inspection, monitoring and repair/replacement of the earthing system. The Contractor should perform timely inspection and monitoring of the system, as per the recommended and preferred frequency, as per the O&M Manual.

The Contractor shall take measurement of earth resistance and measurement data shall be produced on quarterly basis for healthy monitoring of the system.

• Cable Schedule and Maintenance:

There are different types of Cables spread around the plant:

**HT Cable (Power):**

HT Cable network is spread to different locations of the plant. The Cables are laid in trenches and also over-ground, in Aluminum Cable Trays, dressed with Aluminum Clamps.

Number of existing joints are defined in Cable Schedule. In case of failure of Cable beyond existing jointing locations, new

joint has to be made and the same shall have to be incorporated in the Cable Schedule, for future reference. However, in case increase in number of joints affects the reliability of the Cable, such Cable is to be entirely replaced.

**LT Cable (Control & Power):**

LT Cable (Control & Power) network, in different sizes & span, is spread to different locations of the plant.

The Control & Power Cables are mostly laid on Aluminum Cable Trays, dressed with Aluminum Clamps.

**Profibus Communication Cable:**

Profibus network is also available in the plant.

**Trailing Cable (Control & Power):**

Copper Flexible Trailing Power Cable and Trailing Control Cable are used in Stackercum-reclaimer and Shiploader. There are 6 (six) spans of Trailing Power Cable and also 6 (six) spans of Trailing Control Cable, each span measuring around 600 meters.

NB: Detailed information of the Cable Schedule can be obtained from MCHP site.

- **Maintenance of communication facility:**

The Contractor shall be responsible for maintenance of communication facility, such as Walkie Talkies and VHF Fixed Station communication system, in healthy condition, with supply of all instruments, spares, networking components during the term of the contract. This is very much essential for smooth operation and maintenance of the plant.

At the time of hand over of plant, HDC shall handover the existing VHF Sets (handsets, base stations, etc.) to the Contractor for his use. At the end of the contract, the Contractor shall return the VHF Sets and other communication facility, received from HDC, in reasonably good and working condition.

- **Maintenance of illumination system:**

The Contractor shall be responsible for maintenance of illumination system of the plant, for desired illumination level in different areas of plant during day and

night operation of the plant, as per requirement, which is very much essential from operation and safety point of view.

- Maintenance of EOT Cranes, Electrical & Manual Hoists, etc:

The Contractor shall be responsible to maintain the EOT Cranes and Electrical & Manual Hoists in healthy condition, to meet the requirement, as and when required.

- Additional work:

Additional work is any work, which neither applies to scheduled service nor to emergency service work. It may arise from the identification of failures and non-compliance during inspections, which the Contractor executes, at regular intervals, without any price implication to HDC.

- In case of any breakdown maintenance / repair, if any spare is not available with HDC, the same may be procured by the contractor and utilized in commissioning the equipment / machine. In such case, on completion of the job, based on the value of the spare, as per the invoice to be raised by the contractor, the same may be reimbursed with a small percentage (6%) as service charge.

1.9..10 Adequate precautions shall be taken to prevent danger from Electrical equipment. When workers are employed on Electrical installations, which are already energized, insulating mats, working apparels such as gloves, sleeves and boots, as may be necessary, shall be provided by the Contractor.

1.9..11 **Written clearance:** All maintenance activities shall be executed, after taking shutdown and issuance of clearance from Sub-stations or SIC/EIC of HDC. The Contractor must obtain written clearance, in a format (maintained in shutdown register) acceptable to HDC, clearly indicating the nature of maintenance intended to be undertaken, the equipment name, expected time of commencement and completion. The Contractor shall also mention the time that he would require to bring the machine to operational condition, in the event of any emergency need.

1.9..12 The Contractor shall prepare the plant and systems for inspections and allow inspections of the plant by competent authorities;

1.9..13 The Contractor shall use the Workshop building for the purpose of maintenance activities like fabrication/repairs/overhauling/disassembly/

assembly, etc. HDC is having some Workshop equipment, which would be handed over to the Contractor. On closure of the contract, the machinery shall be handed over to HDC in efficient operating condition. In case the Contractor has intention to install additional machine tools, then statutory clearance, as applicable, shall be obtained by the Contractor, before installation of machine tools.

**1.9..14 Procedure to be followed before commencement of work:**

- a) The Contractor shall be handed over a list of consumables, POL, etc. - as available in good condition at Master Control Store of HDC - that are applicable for the plant & equipment of MCHP. The Contractor may verify the same, along with representative(s) of HDC. Whenever there is a requirement of consumables, POL, etc. by the Contractor during maintenance activities of MCHP and such item is available in good condition at the store of HDC, the same shall have to be consumed by the Contractor. The purchase cost of the said item and 19.25% overhead thereupon will be recovered from the bill of the Contractor in the succeeding month. As such, all requirements of consumables, POL, etc. by the Contractor must first be brought to the notice of the EIC. Moreover, during monthly certification of work by the EIC, the Contractor must submit the list of consumables, POL, etc. consumed by the Contractor during the said month. If it is found that the Contractor has not utilized consumables, POL, etc. available in good condition with HDC, during requirement of the same, the purchase cost of the said item and 19.25% overhead thereupon will be recovered from the bill of the Contractor in the succeeding month, even if the same has not been utilized by the Contractor. Upon subsequent requirement of such item by the Contractor, the same would be handed over to the Contractor, without any additional cost deduction.

**1.9..15 Procurement, inspection, storage, maintenance and use of inventory:**

Following the taking over of the plant, the Contractor shall plan and prepare a detailed report on the consumables, POL, etc. and initiate procurement action, so that the materials are

timely available in site, as per the requirement.

- a) The consumables i.e. POL, fasteners, HRC Fuse, Electrode, gas etc. shall conform to applicable standard, specifications, drawings and shall be suitable for intended purpose and shall be new and genuine.
- b) Maintaining the quality of materials is the essence of healthiness of plant, which results in increase in reliability of plant. Therefore, material shall be procured following predetermined QAP, in order to maintain the quality of the material, where ever required.
- c) The Contractor shall forward copy of specification and QAP (if applicable) of items [being procured by the Contractor] to HDC for reference.
- d) After receipt of materials (consumables) at site store, intimation shall be given to HDC for inspection and acceptance of material, in accordance with specification, drawing and test & inspection certificates. Without test certificate, materials shall not be accepted. Acceptance of material by HDC shall not relieve the Contractor from their obligations.
- e) HDC's right to inspect, test and where necessary, reject the goods, after arrival of the goods in HDC's premises shall, in no way, be limited or waived by reason of the goods having previously been inspected, tested and passed by HDC or its representative, prior to the good's shipment from the place of origin.
- f) The entire inventory shall be stored in accordance with ISO. Maintenance of inventory shall be made following the applicable standards and procedures. No material on any of the sites of the MCHP shall be so stacked or placed as to cause danger or inconvenience to any person.
- g) The lubricants shall be stored in a clean and dry place, under cover, to prevent deterioration and contamination due to exposure to varying environment. Drums of lubricants shall be stored in the condition prescribed by the lubricant supplier. Receptacles shall be kept clean/open. Lubricants, which are contaminated with dirt or other foreign materials, shall not be used.
- h) The Rubber items shall be stored properly and consumed before its expiry date, otherwise expired Rubber items shall be disposed of,

following standard procedure.

- i) Material brought into the site shall not be taken out without the gate pass issued by HDC.
- j) During the tenure of this contract, the Contractor shall maintain adequate record of inventory and usage and shall submit a report, as and when required by HDC.
- k) First In - First Out (FIFO) is generally the basis for consumption of items and specifically for items having shelf life.

#### 1.9..16 **Inventory Control:**

The surplus materials, if any, procured by the Contractor during the contract period, can be taken back by the Contractor, at the end of the contract, with due clearance from HDC.

- **Administration, Engineering Support, Safety, Training:**

The Contractor shall establish procedures, plan & schedules and resources to accomplish the intended objectives of Administration, Engineering Support, Safety, Training, which are required for smooth maintenance of the plant. Timely compliance to statutory requirements is the foremost responsibility of the Contractor.

The Contractor shall be responsible to ensure the safety of the plant and all of the plant personnel and other personnel employed by the Contractor for the service as well as other individuals and invitees who are at any time in the plant.

- **Record keeping and report generation for Management Information System (MIS):**

During execution of the contract, the Contractor shall maintain adequate records and generate reports for Management Information System (MIS). Record keeping and report generation for the following activities of the plant should be done:

- i) Maintenance
- ii) Housekeeping and cleanliness

The Contractor shall maintain the data to determine the cause of failures and take decision on the corrective action for maintenance and improving the performance of the plant & equipment.

The Contractor shall develop a framework of systems or adopt the existing system implemented in MCHP, procedures and guidelines towards record keeping and report generation for proper Maintenance management. The log books and reports for various functional activities are to be maintained by the Contractor. The requirement of records and reports may vary, from time to time, depending upon the requirement of either HDC or Govt. or even the Contractor. Formats, schedules and

procedures for record keeping and report generation are already developed for monitoring of maintenance. If required, the formats and procedure can be further customized/modified on mutually agreed terms between EIC and Contractor. Also, these may be reviewed, monitored and modified, by mutual agreement, if required, during the term of contract. The Contractor may develop computerized log books and reports instead of conventional method of record keeping and report generation under Management Information System.

The Contractor shall keep HDC appraised of the plant health.

**Other works:**

In the event HDC procures and installs new machines like Wagon Tippler, Stacker-cum-reclaimer, Ship loader, Sizer/Crusher, Power Transformer (400 kVA and above), the Contractor shall have to maintain the same, at no extra cost to HDC.

Moreover, if dust mitigation system, other than Fog mist Canon, is installed in any area of the MCHP, including the stockpiles, the Contractor shall also have to maintain the same, at no extra cost to HDC.

• **Monthly Reports:**

The Contractor shall submit the following monthly reports to HDC, in formats acceptable to HDC, along with the bills:

- a) Extract of Preventative Maintenance.
- b) Extract of Corrective Maintenance.
- c) Extract of compliance of lubrication schedule.
- d) Material inspection report, as and when applicable.
- e) Spare consumption certificate, issued by HDC's representative, as and when applicable.
- f) Satisfactory compliance to site order or site instruction and tender scope of work.
- g) An undertaking that all statutory rules and regulation have been followed.
- h) OEM, Contractor & HDC's joint inspection report, as and when applicable.
- i) Site audit report as and when applicable.

Without these reports, bills shall not be processed for payment.

• **Final inspection and acceptance:**

- 1.9..1 The Contractor shall, 3 (three) months prior to the expiry of the contract period or if called for by HDC earlier, notify HDC, in writing, to take over the MCHP. HDC shall make a final inspection, within reasonable time, take over the system, in

fully working and reasonably good condition. In case of any defect or abnormality, observed during inspection, the same shall be made good by the Contractor, at his own cost and arrangement, within a reasonable period, failing which, the final payment shall be withheld.

1.9..2 The Contractor shall remove all tools, equipment and materials brought by the Contractor.

1.9..3 The Contractor shall hand over an updated inventory list, taking into account all additions and deletions during the term of this contract, and deliver to HDC all the then-existing inventory and documents, in accordance with the scope of work of the Contractor.

1.9..4 The Contractor shall remove all their personnel, except as otherwise instructed by HDC. The Contractor shall be solely liable for resettlement, compensation or any other obligations, in respect of the Contractor's personnel engaged during the term of the contract. The Contractor shall keep HDC indemnified against claims, if any, pertaining to his personnel.

1.9..5 The Contractor shall settle all dues, recoveries, insurance claims, if any, with HDC.

1.9..6 The Contractor shall hand over all the records/ instruction manuals/drawings/documents, as had been received from HDC, back to HDC, in proper condition.

1.9..7 The Contractor shall prepare and hand over all the records, including, but not limited to, plant performance, logs and history data of the equipment, which may or may not be part of day to day report, in hard and soft copies.

#### 1.10 **Contract period (SCC)**

- The contract period will be 2 (Two) years with a provision for extension of one 1 (year), from the date of award of contract, i.e. award of LOI/LOA. A year means 12 (twelve) calendar months.

#### 1.11 **Price variation (SCC)**

- Since this contract is intended for 2 (two) years, price variation shall be allowed once in a year, from the 1<sup>st</sup> year onwards, i.e., if the date of commencement of work is say 01.01.2019, then the price variation shall be allowed on 01.01.2020, which will continue for the 2<sup>nd</sup> year and the next price variation shall be allowed on 01.01.2021, if contract is extended for another one year.
- The contract price shall be adjusted, every year, as detailed in Clause No. 1.12.1, in accordance with the following escalation formula or 10%, whichever is lower:

$$P_r = P_o / 100 (15 + 30 M_n/M_o + 55 L_n/L_o).$$

1.12 **Facilities to be provided by the Employer/ Employer's obligations (SCC)**

where;

$P_r$  = Adjusted price.

$P_o$  = Price accepted. [Price accepted shall mean that the contract price, as indicated in the LOI/LOA and valid for the 1<sup>st</sup> year of contract, counted from the date of commencement of work.]

$M_n$  = Index Number of Wholesale Price in India (Average) for Machinery and Machine Tools, as applicable on the 1<sup>st</sup> day of the contract year (considering the date of commencement of work), published in RBI Bulletin.

$M_o$  = Index Number of Wholesale Price in India (Average) for Machinery & Machine Tools as applicable on the base date i.e. due date of submission of bid, published in RBI Bulletin.

$L_n$  = Consumer Price Index Number for Industrial Workers (All India Average) as published in RBI Bulletin, applicable on the 1<sup>st</sup> day of the contract year (considering the date of commencement of work).

$L_o$  = Consumer Price Index Number for Industrial Workers (All India Average) as published by RBI Bulletin, as applicable on the base date i.e. due date of submission of bid.

$M_o$  and  $L_o$  shall remain unchanged during the contract period.

- In the above price escalation formula, value for  $M_n/M_o$  and  $L_n/L_o$  shall be taken considering 2 (two) digits after decimal and price adjustment shall be calculated accordingly.
- The above price escalation will also be applicable for any extension of the contract period.
- In case of delay in publication of RBI Index, the previous year's escalation will continue provisionally, subject to adjustment after publication of the RBI Index.
- KoPT will separately allot space (covered/open) for setting up office, store and workshop for maintenance of equipment, as may be required by the Contractor, for fulfilling all the obligations of the contract. Such allotment, other than for maintenance work, will be made at the rate provided in the prevailing Schedule of Rent of KoPT's land and buildings at Haldia, including annual escalation thereof.  
  
No rent will be charged by KoPT for the space to be utilized by the Contractor for parking of different equipment, as applicable, during idle hours. However, such parking will have to be done at the area to be earmarked by KoPT.
- Unless specified otherwise, KoPT will provide electricity and water to the Contractor, as may be required, on chargeable basis, from its available sources. If required, the Contractor may have to lay their own water/electric line, from nearest KoPT source up to their place of requirement, for which KoPT will grant way leave license, on chargeable

basis.

Regarding electricity and water supply, necessary meters should be installed by the Contractor at his own cost.

Supply of electricity for maintenance / repair work of various equipment will be provided on free of cost.

Electricity charges will be determined on the basis of chargeable unit (kWh) [actual unit (kWh) consumed (recorded through Energy Meter) + 3% (transformation loss) on actual unit consumed] and chargeable maximum demand (in case of 3.3 kV supply) [actual maximum demand recorded + 3% (transformation loss) on actual maximum demand recorded] and prevailing rate of West Bengal State Electricity Distribution Company Ltd (WBSEDCL), from time to time. In case of 3.3 kV supply, applicable rate would be 11 kV commercial rate of WBSEDCL, prevailing from time to time. Billing will be done on the basis of electricity charges and overhead charges @ 19.25% [on the aforesaid electricity charges] as per notifications of TAMP. Electricity readings will be collected on monthly basis.

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 on receipt of bills from the Finance Division of HDC, KoPT. 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 bills.

KoPT do not guarantee uninterrupted supply of electricity and the Contractor shall not be compensated for any delay or irregularity in supply of electricity.

- The Contractor will be allowed to install telephone(s) and other communication arrangements, within the Dock area, for communication purpose, at their own cost and arrangement.
- Medical facility will not be provided by HDC, KoPT to the Contractor. However, the Contractor's personnel can be provided with medical facilities at HDC Hospital, in emergency cases only, on payment basis.
- The Contractor shall have to obtain required RFID based permits/licenses for its employees, workmen, security personnel, vehicles, tools and tackles, equipment and accessories etc. [including that of his Sub-contractor(s)], for entry into the Dock area, following the procedure of KoPT in vogue at HDC. The required permits/licenses will be issued on chargeable basis.
- Administrative support only, for obtaining clearance from any statutory authority, shall be provided by HDC, KoPT.
- Drawings, specification and manuals of the plant, equipment, buildings, Sub-stations, etc., whatever are available with HDC, may be handed over to the Contractor as

1.13 **Drawings and manuals of the plant**

(SCC)

per requirement, on request, as deemed necessary by the "Engineer". But this will not be an obligation to HDC. In addition, the programmes for PLCs, if available with HDC, may be handed over to the Contractor, if requested, if deemed necessary to execute the contractor's obligation. It is the responsibility of the Contractor to keep such drawings, specification and manuals of the plant, equipment, buildings, Sub-stations, etc. as well as programmes for PLCs in safe custody, if provided, and make a plant information library, keeping all such items satisfactorily indexed. Photos of important activities may also be kept. The Contractor is also responsible for preparing drawings afresh for missing drawings or non-available drawings and updating the plant drawings, on a regular basis, to ensure that they are always maintained in a current state. However, the drawings, specification, manuals, programmes for PLCs, etc. are the property of HDC and their secrecy shall be maintained by the Contractor. The same should be utilized only for the scopes under contractual obligations and the same shall be returned to HDC on completion of the contract. Existing Intellectual property law at the time will be applicable in this regard.

1.14      **Deduction on  
default (SCC)**

- Availability factor of machines, equipment and systems, as per norms, on demand, carrying out proper maintenance, attending breakdown in time (rectification of faults), inventory management with respect to consumable and following the safety aspects, statutory norms and regulations are the essence of this contract. Therefore, the Contractor shall meet the performance parameters/norms/obligations pursuant to the contract. Failure on the part of the Contractor to comply with the requirements shall attract deductions on account of under-performance.

- **AVAILABILITY FACTOR OF MAIN SYSTEM:**

The Contractor shall ensure that the machines, equipment/ system are available on demand all the time. The Contractor shall guarantee an availability factor of 90% in a given month for the main system, i.e. shipping streams and receiving streams, on demand.

The percentage of availability shall be calculated as under:

A = Total demand time.

B = Stoppages on account of the Contractor during the demand time. [***Non-availability period (in hour) of machines, equipment/ system***]

$$\% \text{ of Availability} = \{ (A - B) / A \} \times 100$$

**DEDUCTION ON ACCOUNT OF NON-AVAILABILITY OF AVAILABILITY FACTOR:**

Failure on the part of the Contractor to meet the availability of 90% shall attract a deduction due to under-performance on monthly basis and to be deducted from the monthly bill.

% of availability would be calculated, on a daily basis, for all machines, equipment/ system utilized during the day, taken together.

The deduction for under-performance shall be as follows:

<u>Machines, equipment/ system</u>	<u>Deduction</u>
90% and above	NIL
For subsequent each 1% less than 90%	0.5% of total monthly bill for the period of non-achieving 90% subject to maximum 10% of monthly bill.

The deduction shall be made from the quoted amount per month against maintenance of machines, equipment/ system.

- **DEDUCTION DUE TO VIOLATION OF SAFETY**

**NORMS:**

The Contractor shall comply with all the requirements of safety regulations as applicable and comply, in all respect, with all applicable laws of any duly constituted authority in India. HDC is ISO certified as well as ISPS compliant. The Contractor shall ensure that all actions of the Contractor comply with ISO and ISPS requirements.

Without any prejudice, any violation of safety requirements will make the Contractor liable for a deduction of Rs. 5,000/- for the 1<sup>st</sup> violation, Rs. 10,000/- for the 2<sup>nd</sup> violation and Rs. 25,000.00 for the 3<sup>rd</sup> violation. For any further violation(s), over and above a penalty of Rs. 50,000.00, the Contractor may be liable to be debarred from further execution of the contract, i.e. HDC would reserve the right to terminate the contract.

- **EVALUATION OF YEARLY PERFORMANCE:**

The performance of the Contractor shall be judged, depending upon fulfillment of obligations of the contract, such as maintaining the desired level availability machines, equipment/ system of plant, inventory management with respect to consumable, etc.

Failure on the part of the Contractor to comply with the requirements shall attract deductions on account of defaults, as outlined in Clause Nos.1.14.2.

The overall performance of the Contractor shall be treated as satisfactory, if the total deduction amount on default in a contract year does not exceed 10% of the contract price in the concerned contract year.

If the above condition is not met with, i.e., the overall performance of the Contractor is not found to be satisfactory

1.15            **Payment**  
                 **terms: (SCC)**

(as per the above criteria), the Contractor would be given an opportunity to improve performance within the next year of the contract.

However, if the overall performance of the Contractor is still not found satisfactory, i.e. for 2 (two) consecutive years, the Contractor may be liable to be debarred from further execution of the contract, i.e., HDC would reserve the right to terminate the contract.

- **RESPONSIBILITY TO RECTIFY LOSS OR DAMAGE:**

If any loss or damage happens to the works/property of HDC or any part thereof, due to negligence of the Contractor, for which the Contractor is supposed to take care thereof during the period of the contract, the Contractor shall, at his own cost and arrangement, rectify such loss or damage to the works/property of HDC, to the satisfaction of HDC.

In the event of an emergency, where, in the judgment of HDC, delay would cause serious loss or damage, repairs or adjustments may be made by HDC or a third party chosen by HDC with advance notice to the Contractor and the cost of the work shall be paid by the Contractor.

100% payment against monthly availability of machineries should be made against submitted monthly RA Bill, within 30 days, from the date of submission of clear & unambiguous bill along with log abstract regarding availability of equipment/machinery, clearly depicting availability of equipment/machinery during the calendar month, duly certified by Sr. Dy. Manager (P&E) or his authorized representative, under P&E Division of HDC-KoPT.

The contractor will be allowed to submit bill(s) only once in a calendar month.

Any claim for interest will not be entertained by HDC, KoPT with respect to any payment or balance which may be in their hands owing to any disputes between themselves and the contractor or with respect to any delay on the part of HDC, KoPT in making payment.

**SECTION -VIII**  
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## General Conditions of Contract (GCC)

### A. GENERAL PROVISIONS

#### 8.1 Definitions

In the conditions of contract (“these conditions”), which includes particular conditions and these general conditions, the following words and expressions shall have the meanings stated. Words indicating persons or parties include corporations and other legal entities, except where the context requires otherwise.

##### 6.1.1 The Contract:

- a) **“Contract”** means and includes these **bidding documents** in entirety (including all Addenda and Corrigenda, if any), the **specification**, the **drawings**, the **PRICE SCHEDULE**, the **bid / offer**, the **Letter Of Acceptance**, the **Contract Agreement** (when Contract Agreement would be completed in all respect) and such further documents as may be expressly incorporated in the **Letter Of Acceptance** or **Contract Agreement** (when Contract Agreement would be completed in all respect).
- b) **“Contract Agreement”** means the executed Contract Agreement referred to in **ITB Clause No. 5.37 [Signing of Contract Agreement]**.
- c) **“Contract documents”** means the documents listed in the Contract Agreement, including any amendments thereto.
- d) **“Letter Of Acceptance (LOA)”** or **“Work order”** or **“Order letter”** means the formal acceptance of the bid (and placement of order with the successful bidder), issued by or on behalf of the Employer, including any adjustments or variation to the bid agreed between the Employer and the successful bidder and includes its enclosure(s), annexure(s), etc., if any.
- e) **“Specification”** means the specification of the work included in the contract and any modification thereof or addition thereto made under **GCC Clause No. 6.12 [Additions and alterations]** or submitted by the Contractor and approved by the Engineer, in writing.
- f) **“Drawings”** means **all drawings, calculations and technical information**, etc., provided by the Engineer to the Contractor under the contract and all **drawings, calculations, samples, patterns, models**, etc., including modification, if any, and other **technical information & manuals** of a like nature, submitted by the Contractor and approved by the Engineer.
- g) **“Tender”** or **“Bid”** means the proposal (priced offer), along with all supporting documents, submitted by the bidder to the Employer for consideration.

- h) **“Price Schedule”** means the priced schedule of items, forming part of the bid.
- i) **“Tenderer”** or **“Bidder”** means the individual firm, who submits the bid, duly filled up and signed, along with all the required documents and payment instruments, in strict compliance of the conditions / requirements stipulated in these bidding documents.
- j) **“Contract data”** means the pages completed by the Employer entitled **CONTRACT DATA**.

#### 8.1.2 Parties and persons :

- a) **“Party”** means the **Employer** or the **Contractor**, as the context requires.
- b) **“Employer”** or **“Board”** or **“Trustees”** or **“Kolkata Port Trust”** or **“KoPT”** means the Board of Trustees for the Port of Kolkata (Calcutta), a body corporate under **Section 3** of the **Major Port Trusts Act, 1963** (as amended from time to time), including their successors, representatives and assigns.
- c) **“Contractor”** or **“Successful bidder”** or **“Successful tenderer”** means the person or persons, firm or company, whose bid / offer has been accepted by the Employer and is named as such in the Contract Agreement or his representative(s), who is/are duly authorised to deal the contract.
- d) **“Contractor’s representative”** means the person(s) named by the Contractor in the contract or appointed from time to time by the Contractor, under **GCC Clause No. 6.21 [Contractor’s personnel and Contractor’s representative]**, who acts on behalf of the Contractor.
- e) **“Sub-contractor”** shall mean a person or persons, firm or company to whom a part of the work has been sub-contracted by the Contractor, with prior consent of the Employer.
- f) **“Contractor’s personnel”** means the Contractor’s representative and all personnel whom the Contractor utilises on site, who may include staff, labour and other employees of the Contractor and of each Sub-contractor, and any other personnel assisting the Contractor in the execution of the work.
- g) **“Engineer”** means the person appointed by the Employer to act as the Engineer for the purposes of the contract and named in the **Contract data**, or other person appointed from time to time by the Employer and notified to the Contractor under **GCC Clause No. 6.18 [Replacement of the Engineer]**.
- h) **“Engineer’s Representative”** means any sub-ordinate Engineer or assistant to the Engineer or any other official appointed from time to time by the Engineer to perform the duties set forth in **GCC Clause Nos. 6.13 to 6.15** hereof.
- i) **“Engineer-in-charge”** means employee of KoPT, authorised by the Engineer to look after the physical execution of the contract, at site level.
- j) **“Haldia Dock Complex”** or **“HDC”** means a Dock Complex situated at Haldia, under **Kolkata Port Trust**.

- k) **“Chairman”** means the Chairman of the Board of Trustees for the Port of Kolkata (Kolkata Port Trust) and includes the person appointed to act in his place under Sections 14 and 14A of the Major Port Trusts Act, 1963.
- l) **“Deputy Chairman”** means the Deputy Chairman, Haldia Dock Complex and includes the person appointed to act in his place.
- m) **“General Manager (Engineering)”** means the Officer appointed to take charge of Plant & Equipment Division, Infrastructure & Civic Facilities Division and Materials Management Division of HDC, under the supervision of the Deputy Chairman, HDC.
- n) **“Senior Deputy Manager (P&E)”** means the Officer of Plant & Equipment Division of HDC, reporting to the General Manager (Engineering).

#### 8.1.3 Dates and periods:

- a) **“Completion period”** means the time of completion/period of execution notified under 6.65 [Completion period].
- b) **“Month”**, for the purpose of this contract, shall mean the period starting from the date of commencement in any month to the previous date of the following month, as per English Calendar.
- c) **“Week”**, for the purpose of this contract, shall mean any period of 7 (seven) consecutive English Calendar Days.
- e) **“Day”**, for the purpose of this contract, means English Calendar Day.

#### 8.1.4 Money and payments:

- a) **“Contract price”** or **“Contract value”** means the sum named in the **“Letter of Acceptance (LOA)”** [excluding GST] of the bid /offer of the Contractor, subject to such additions thereto and deductions therefrom, as may be made by the Engineer, under the provisions contained in this bidding document.
- b) **“Cost”** means all expenditure reasonably incurred (or to be incurred), by the Contractor, whether on or off the site, including overhead and similar charges, but does not include profit.
- c) **“Foreign Currency”** means the currency other than Indian Currency.

#### 8.1.5 Work:

- a) **“Work”** means the work to be executed in accordance with the contract and includes authorised **“Extra work”**, **“Excess work”** and **“Temporary work”**.
- b) **“Temporary work”** means all temporary work of every kind required in or about the execution, completion or maintenance of the work 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.
- c) **“Excess work”** means the required quantities of work, in excess of the provision made in the contract, against any item of the **“Price Schedule”**.

- d) **“Extra work”** means those work, required by the Engineer for completion of the contract, which were not specifically and separately included in the schedule of items of the work (i.e. **“Price Schedule”**) of the bidding document.
- e) **“Related Services”** means the services incidental to the supply of goods / contract job, such as insurance, installation, training, initial maintenance and other obligations of the Contractor, under the contract.

#### 8.1.6 Other definitions

- a) **“Constructional plant”** means all appliances or things, of whatsoever nature, required in or about the execution, completion or maintenance of the work or temporary work 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 work.
- b) **“Site”** means the land and other places, on, under, in or through which the contract is to be executed or carried out and any other lands or places provided by the Employer for the purpose of the contract.
- c) **“Excepted Risks”** means 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).
- d) **“Approved / approval”** means approval in writing.
- e) **“Test on Completion”** means such tests, prescribed by the applicable Design Standard, codes and described in the bidding document, to be performed by the Contractor before the equipment / items / installations are supplied, delivered and taken over by the Employer.
- f) **“Defect Liability Period (DLP)”** means the period defined in the GCC Clause No. 8.67.
- g) **“Force Majeure”** is defined in GCC Clause No. 8.86 [Definition of Force Majeure].

## 8.2 Contract documents

- 8.2.1 The several documents forming the contract are to be taken as mutually explanatory of one another and should anything appear in one, which is not described in the other, no advantage shall be taken of any such omission.
- 8.2.2 In case, any discrepancies or inconsistencies however appear or should any misunderstandings arise as to the meaning and of the specifications or drawings or as to the dimensions or the quality of the materials or the due and proper execution of the work or as to the measurement or quality and valuation of the work executed under this contract or as extra thereupon, the same shall be explained by the Engineer or his authorised representative.
- 8.2.3 The explanation of Engineer or his authorised representative shall be final and binding upon the Contractor and the Contractor shall execute the work according to such explanations, and without extra charge or deductions and do all such work

and things as may be necessary for the proper execution of the contract as implied by the specification and drawings, even though such work and things are not specifically shown and described therein.

### **8.3 Interpretations**

**8.3.1** In the contract, except where the context requires otherwise:

- a) words indicating one gender include all genders;
- b) words indicating the singular also include the plural and words indicating the plural also include the singular;
- c) provisions including the word “agree”, “agreed” or “agreement” require the agreement to be recorded in writing;
- d) **“written”** or **“in writing”** means hand-written (manuscript), type-written, printed or Electronically made, and resulting in a permanent record, under or over signature and seal, as the case may be;  
and
- e) the word “tender” is synonymous with “bid”, and “tenderer” with “bidder” and the words “tender documents” with “bidding documents”.

### **8.4 All Drawings are Trustees’ property**

**8.4.1** The Drawings, referred to in the Special Conditions of Contract / Technical Specification / Price Schedule, if and as applicable, shall be furnished by the Engineer to the Contractor, 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.

### **8.5 Language**

**8.5.1** The contract as well as all correspondence and documents relating to the contract, exchanged between the Contractor and the Employer/Engineer, shall be written in **English Language only**. If any documents/manuals/printed literature/drawings is submitted by the Contractor in other language(s), the same should be accompanied by an accurate translation of the relevant pages in the English language. In that case, for the purposes of interpretation of the contract, such translation shall govern.

**8.5.2** The Contractor shall have to bear all costs of translation to the English Language and all risk of the accuracy of such translation, for documents provided by the Contractor.

### **8.6 Notices**

**8.6.1** Any notice, given by one party to the other, pursuant to the contract, shall be in writing, to the address specified in the Contract data. The term “in writing” means communicated in written form, with proof of receipt.

**8.6.2** A notice shall be effective when delivered or on the notice’s effective date, whichever is later.

### **8.7 Governing Law**

**8.7.1** The contract shall be governed by and interpreted in accordance with the relevant Indian Acts [considering latest amendment thereof], as applicable, within the jurisdiction of the Honourable High Court of Kolkata [ Calcutta High Court] , India, including the following Acts:

- i) The Indian Contract Act, 1872.
- ii) The Major Port Trust Act, 1963.
- iii) The Workmen's Compensation Act, 1923.
- iv) The Minimum Wages Act, 1948.
- v) The Payment of Wages Act, 1936.
- vi) The Payment of Bonus Act, 1965.
- vii) The Payment of Gratuity Act, 1972.
- viii) The Equal Remuneration Act, 1976.
- ix) The Employees Provident Fund Act, 1952.
- x) The Employees State Insurance Act, 1948 & The Employees State Insurance (Amendment) Act, 1989.
- xi) The Contract Labour (Regulation & Abolition) Act, 1970; Rules 1971.
- xii) Child Labour (Prohibition & Regulation) Act, 1986.
- xiii) The Maternity Benefits Act, 1961.
- xiv) Interstate Migrant Workmen (Regulation of Employment & Conditions of Service) Act, 1979.
- xv) The Dock Workers (Regulation of Employment) Act, 1948.
- xvi) The Dock Workers (Safety, Health & Welfare) Act, 1986.
- xvii) The Indian Arbitration and Conciliation Act, 1996 [considering its latest amendment in 2015].

**8.7.2** Unless otherwise specified, all the laws / rules / acts, etc., mentioned in different clauses of this bidding document, should be considered as laws / rules / acts, etc. applicable in India.

**8.7.3** The Contractor shall indemnify KoPT for any proceeding taken or commenced by any authority against the Employer for any contravention of any of such laws, bye laws, rules, regulations, orders, etc., by the Contractor or their personnel / workmen / agent / supplier, etc. If, as a result of the Contractor's failure, negligence, omission, default or non-observance of any provisions of any law, bye law, rule, regulation, order, etc., the Employer is called upon by any authority to pay or reimburse or is required to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any amount due or that may become due to the Contractor under this contract or any other contract or by any other means or may otherwise recover from the Contractor any sum which KoPT is required or called upon to pay or reimburse on behalf of the Contractor.

**8.7.4** The Contractor shall indemnify KoPT for any proceeding taken or commenced by any authority against the Employer for any contravention of any of such laws,

by laws, rules, regulations, orders, etc., by the Contractor or their personnel/workmen/agent/supplier, etc. If, as a result of the Contractor's failure, negligence, omission, default or non-observance of any provisions of any law, bye law, rule, regulation, order, etc., the Employer is called upon by any authority to pay or reimburse or is required to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any amount due or that may become due to the Contractor under this contract or any other contract or by any other means or may otherwise recover from the Contractor any sum which KoPT is required or called upon to pay or reimburse on behalf of the Contractor.

## **8.8 Patent Rights**

- 8.8.1** The Contractor shall fully indemnify KoPT against any action, claim or demand, costs or expenses arising from or incurred by reason of any infringement or alleged infringements of letters, patents, design, trademark or name, copyright or other protected rights in respect of any machine, plant, work, materials or things, system or methods of using, fixing working or arrangement used for fixed or supplied by the Contractor in India, or elsewhere.
- 8.8.2** All payments, or otherwise shall be deemed to be included by the Contractor in the prices named in the bid and shall be paid by them to whom they may be payable.
- 8.8.3** In the event of any claim being made or action brought against KoPT in respect of any such matter as aforesaid, the Contractor shall be immediately notified thereof and they shall with the assistance, if they so require, of KoPT but at the sole expense of the Contractor conduct all negotiations for the settlement of the same or any litigation that may arise there from, provided that the conduct of such negotiations or litigations shall be conditional upon the Contractor giving to KoPT such security, as shall from time to time, be reasonably required by KoPT to recover the ascertained or agreed amount, as the case may be, of any compensation, damages, expenses and cost, which might be payable by the Trustees in respect of or as a result of any such negotiation or litigation.

## **8.9 Stamp duty & other expenses**

- 8.9.1** All the costs, charges and expenses to be incurred in connection with **Contract Agreement, Indemnity Bond, Bank Guarantees, Integrity Pact**, etc., including stamp duty, shall be borne by the Contractor.

## **8.10 Indemnity**

- 8.10.1** Notwithstanding that all reasonable and proper precautions may have been taken by the Contractor, at all times during the progress of the work, the Contractor shall, nevertheless, be wholly responsible for all damages, whether to the works themselves or to any other property of KoPT or to the lives, persons, property of others during the progress of the work.
- 8.10.2** In case any damage occurs to the existing structure due to the Contractor's operation, the same shall be made good by the Contractor, at their own risk and cost. The areas, which are likely to be unsafe for use, shall be barricaded and all necessary precautionary measures, like displaying notices, shall be taken by the Contractor, during the contract period.
- 8.10.3** In case any material, spare parts, components, sub-assemblies, accessories, etc., related to the work (under the scope of the Contractor), is required to be taken out of the Dock premises by the Contractor, for some specialised servicing, repairs,

overhauling, etc. or for any other reason whatsoever, the Contractor shall have to obtain permission from the Employer. For this the Contractor shall have to submit an “**Indemnity Bond**” [in the form furnished in **Section-IX-B**].

## **8.11 Employer’s lien**

- 8.11.1** All constructional plant, temporary work and materials, when brought to the site by the Contractor, shall be deemed to be the property of the Employer, 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.
- 8.11.2** The Employer shall have a lien on and over all or any money that may become due and payable to the Contractor under this contract or any other contract or from any amount lying with them or under their control and in respect of any debt or sum that may become due and payable by the Employer to the Contractor, either alone or jointly with another or other and either under this contract or under any other contracts or transaction of any nature whatsoever between the Employer and the Contractor.

## **8.12 Additions and alterations**

- 8.12.1** KoPT shall have power and authority, from time to time and at all times, to make amendments or additions or alterations or changes in the **Technical Specification** and give such further instructions and directions, as may appear necessary and proper to KoPT for the guidance of the Contractor and good & efficient execution of the work.
- 8.12.2** The Contractor shall receive, obey and be bound by the same, according to the true intent and meaning thereof, as if the same had been mentioned or referred to in the **Technical Specification**.
- 8.12.3** KoPT may also vary or alter the levels or positions of any of the work contemplated by approved specification or may order any of the work contemplated thereby to be omitted, with or without substitution of any other works in lieu thereof, or may order any work or any portion of works executed or partially executed, to be removed, changed or altered, if required.
- In this connection, KoPT may increase or decrease or split the quantity of work included in the contract or execute additional work of any kind necessary for good & efficient execution of the work.
- 8.12.4** The Engineer shall have the power to order for the above amendments (additions/alterations/changes, etc.) and any difference in the cost occasioned by any such diminution or alteration so ordered and directed shall be added to or deducted from the amount accepted under the contract based on the rate(s) available in the contract. Where the rate(s) is/are not available in the contract, such difference in the cost shall be determined by the Engineer, taking into account the market rate and labour cost at site for similar work, backed up by rate analysis, (to be submitted by the Contractor and agreed upon between the Contractor and KoPT).

In the event of disagreement, KoPT shall fix such rates or prices as shall, in their opinion, be reasonable and proper having regard to the circumstances.

## **B. THE ENGINEER**

### **8.13 Instructions of the Engineer or Engineer's Representative**

**8.13.1** The Contractor shall execute, complete 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. However, the Engineer shall exercise his discretion impartially, within the terms of the contract and have regard to all the circumstances.

The Contractor shall take instructions from the Engineer and subject to limitation indicated in **GCC Clause No. 8.18.1** hereof, from the Engineer's Representative.

### **8.14 Engineer's power and authority**

**8.14.1** 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 any time.
- 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.
- f) to grant extension of completion time.

### **8.15 Power of Engineer's Representative**

**8.15.1** The Engineer's Representative shall:

- a) watch and supervise the work.
- b) test and examine any material to be used or workmanship employed in connection with the work.
- c) 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.
- d) take measurements of work done by the Contractor for the purpose of payment or otherwise.
- e) order demolition of defectively done work for its reconstruction all by the Contractor at his own expense
- f) have powers to issue alteration order not implying modification of design and extension of completion time of the work.  
and
- g) 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.

### **8.16 Limitation of Engineer's Representative's power**

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

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

**8.17 Engineer's over-riding power**

**8.17.1** Provided also as follows:

- 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 sustained by them.
- b) If the Contractor shall be dissatisfied by reason of any decision of the Engineer's Representative, they shall be entitled to refer the matter to the Engineer, who shall thereupon confirm, reverse or vary such decision which will be final, conclusive and binding on the parties.
- 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.

**8.18 Replacement of the Engineer**

**8.18.1** If the Employer intends to replace the Engineer, the Employer shall give notice to the Contractor in this respect.

**8.19 Determinations**

**8.19.1** Whenever these conditions provide that the Engineer shall proceed, in accordance with this clause, to agree or determine any matter, the Engineer shall consult with each party, in an endeavour to reach agreement. If agreement is not achieved, the Engineer shall make a fair determination, in accordance with the contract, taking due regard of all relevant circumstances.

The Engineer shall give notice to both parties of each agreement or determination, with supporting particulars **within 28 (twenty-eight) days** from the receipt of the corresponding claim or request, except when otherwise specified. Each party shall give effect to each agreement or determination, unless and until revised under **GCC Clause Nos. 8.94 to 8.98 [Claims, Disputes and Arbitration]**.

**C. THE CONTRACTOR**

**8.20 Performance Guarantee / Security Deposit**

**8.20.1** As specified in the SCC, the Contractor shall have to provide **Performance Guarantee / Security Deposit** towards guaranteeing the performance of the

Contractor in execution of the contract.

**8.20.2** The **Performance Bank Guarantee(s)** shall be denominated in the currency(ies) of payment in the contract , and shall be in the form furnished in **Section-XI**.

**8.20.3** The original Bank Guarantee should be sent by the issuing Branch of the Bank, directly to the Employer, under Registered Post (A.D), at the following address:

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

A photocopy of the Bank Guarantee should also be sent to the Engineer, by the Contractor, for record.

The General Manager (Finance), HDC may require Bank's confirmation for having issued the Guarantee. In that case, the issuing Branch of the Bank should send a confirmation letter, directly to the Employer, under Registered Post (A.D), at the above address.

**8.20.4** Failure of the Contractor to submit the required Performance Bank Guarantee, as mentioned in **GCC Clause No. 8.20.1** and in the manner stated in the **SCC**, shall constitute sufficient grounds for termination of the contract and forfeiting the Earnest Money Deposit.

**8.20.5** The proceeds of **Performance Guarantee / Security Deposit** shall be payable to the Employer, as compensation, for any loss resulting from the Contractor's failure to complete its obligations under the contract.

**8.20.6** **Performance Guarantee/Security Deposit** shall be liable to be forfeited, at the option of the Employer, if the Contractor fails to carry out the work or to perform / observe any of the conditions of the contract.

**8.20.7** The Employer shall be at liberty to deduct/recover any of their dues from **Security Deposit/Performance Guarantee**.

In that case, if **Security Deposit / Performance Guarantee** is reduced by reason of any such deduction or encashment, the Contractor shall have to, **within 15 (fifteen) days thereafter**, make good the amount so reduced.

**8.20.8** The cost of obtaining **Performance Bank Guarantee** or any other Bank Guarantee and / or revalidation thereof, whenever required, has to be borne by the Contractor and it shall be their 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 Employer shall be at liberty to raise claim / demand under Performance Guarantee and/or enforce the same unilaterally.

No interest/charge, of whatsoever nature, shall be paid by the Employer on the amount of **Security Deposit / Performance Guarantee** held by the Employer, at any stage.

**8.20.9** On completion of execution of the work, the Contractor shall maintain the same during the "**Defect Liability Period**", as specified in **GCC Clause No. 7.87**,

from the date mentioned in the “**Certificate of Completion of Work**” [as per the form furnished in **Section-IX-D**]. Any defect / fault, which may appear in the work during the 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 7 (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.

**8.20.10** The contract shall not be considered completed and the work shall not be treated as finally accepted by the Trustees, until a “**Certificate of Final Completion**” [as per the form furnished in **Section-IX-E**] shall have been signed and issued by the Engineer, after all obligations under the contract, including that in the Defect Liability Period (DLP), 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.

**8.20.11** Refund of **Performance Guarantee / Security Deposit** would be guided by the procedure detailed in the **SCC**.

## **8.21 Contractor’s personnel and Contractor’s representative**

**8.21.1** The Contractor’s personnel shall be appropriately qualified, skilled and experienced in their respective trades or occupations. The Engineer may require the Contractor to remove (or cause to be removed) any person employed on the site of work, including the Contractor’s representative, if applicable, who:

- a) persists in any misconduct or lack of care,
- b) carries out duties incompetently or negligently,
- c) fails to conform with any provisions of the contract, or
- d) persists in any conduct, which is prejudicial to safety, health or protection of the environment.

If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

**8.21.2** The Contractor shall have to communicate the names of their officials/representatives, authorized by them through **Power of Attorney** (specimen signature of such authorized representative should be attested), to make all correspondences and sign all documents/papers in relation to this contract.

Written orders or instructions, which the Employer may issue to such authorized officials/ representatives of the Contractor, shall be deemed to have been given to the Contractor.

**8.21.3** In case any of such authorised persons fails to act as Contractor’s representative, the Contractor shall similarly communicate the name and particulars of another suitable person for such authorization.

The Contractor shall have to notify the Engineer, immediately after revoking the appointment of the Contractor's representative and appointment of a replacement.

- 8.21.4** If any of the Contractor's representatives/officials is required to be temporarily replaced during the period of contract, the name of the person temporarily authorised [by any one of the authorised officials/representatives, authorized earlier through **Power of Attorney**], shall have to be notified. Specimen signature of such temporarily authorised representative(s) should be attested [by the said authorised official/representative].

## **8.22 Assignment and sub-contracting**

- 8.22.1** The Contractor shall not, directly or indirectly, transfer, assign, sublet or sub-contract the whole of the work.

Unless otherwise stated in the contract, the Contractor shall not, directly or indirectly, transfer, assign, sublet or sub-contract any part of the work without prior consent of the Engineer. Any such consent shall not relieve the Contractor from any of their liabilities or obligations under the contract and they shall be responsible for :

- a) the acts, defaults and neglect of any Sub-contractor, their agents, servants or workmen as fully as if these were the acts, defaults or neglects of the Contractor, their agents, servants or workmen,
- b) their full and entire responsibility of the contract and active superintendence of the work by them despite being sublet.

**Provided that** the Contractor shall not be required to obtain such permission for:

- i) the provision of labour engaged on piece-work basis/daily rate basis,
- ii) the purchase of materials/services which are in accordance with the standards specified in the contract,
- or
- iii) the sub-contracting of any part of the work, for which the Sub-contractor is named in the contract.

The Contractor shall be responsible for observance, by all Sub-contractors, of labour laws applicable in India (for the portion of work that would be executed in India) and all other provisions of the contract.

- 8.22.2** No **participating bidder** [in connection with the instant tender] will be allowed to act as a **Sub-contractor** of the successful bidder (Contractor).
- 8.22.3** In the event of the Contractor contravening aforesaid condition [**GCC Clause No. 8.22.2**], the Employer shall be entitled to terminate the contract forthwith and award a fresh contract to some other parties at **risk and cost of the Contractor**, who shall be liable for any loss or damage, which KoPT may sustain in consequence to arising out of such replacement of the Contractor.
- 8.22.4** The Contractor shall not assign their right and interest in these presents nor assume a fresh partner or partners, dissolve the partnership existing between them in reference to this contract, without the prior written permission of the Employer.

## **8.23 Access to site**

**8.23.1** The Contractor shall have to abide by the **rules and regulations of Kolkata Port Trust (KoPT)** in respect of entry / exit and movement in the dock premises.

**8.23.2** Necessary **Gate Pass / Dock Entry Permit**, for entering into the Dock area, will be issued to the personnel of the Contractor [including that of approved Sub-contractor(s)] directly connected with the work, **on chargeable basis** [as per the extant “**Scale of Rates**” of KoPT, available at <http://www.kolkataporttrust.gov.in/> of **Kolkata Port Trust**], on receipt of a formal written request.

However, for issuing such Gate Pass, the following would be required:

- i) **For Indian nationals:** A photocopy of the Voter’s Identity Card/any other Photo Identity Card.
- ii) **For foreign nationals (excluding from Nepal and Bhutan):** **Permission in the form of “No objection” for entering Haldia Dock**, from the office of the **Superintendent of Police, Purba Medinipur, West Bengal, India**, which acts as the **District Registration Office** for foreigners.

**Dock Entry Permits shall not be issued to the mentioned foreign nationals without the aforesaid permission.** The aforesaid “No objection”, along with photocopies of Passport and Visa of the foreign national, has to be submitted to the Administration Division of HDC, KoPT, with an application for obtaining Dock Entry Permit(s).

**8.23.3** The Contractor will be fully responsible for any injury (whether fatal or otherwise) to their personnel [including that of approved Sub-contractor(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.

**8.23.4** The Contractor will be liable to indemnify the Employer against any loss or damage to the property of the Employer or neighbouring property, which may be caused due to any act of the Contractor or their personnel [including that of approved Sub-contractor(s)].

**8.23.5** **No photograph within the Dock Area** shall be taken by the Contractor, without prior permission of the Engineer.

## **8.24 Transportation of materials**

**8.24.1** All materials, spare parts, tools, tackles, service equipment, including consumables, required under this contract, will have to be packed, securely placed and protected by the Contractor during transportation. The Contractor will be held responsible for the inefficient packing, storing and protection of the materials.

## **8.25 Contractor’s equipment**

**8.25.1** The Contractor shall be responsible for all the equipment of the Contractor. When brought on to the site, the Contractor’s equipment shall be deemed to be exclusively intended for the execution of the work. The Contractor shall not remove from the site any major items or Contractor’s equipment without the consent of the Engineer. However, consent shall not be required for vehicle(s)

transporting goods or Contractor's personnel off site.

## **8.28 Supply of water and Electricity**

### **8.26.1 Supply of water:**

Drinking water supply at the **Contractor's site office, store, workshop, assembly/erection yard, etc.** will be given on **chargeable basis**. For this, the Contractor shall have to make **all arrangements, including installation of Water Meter and laying of pipelines from the source(s) identified by KoPT, at their cost**. The Contractor will be responsible for maintenance and calibration of such water meter also. Billing against water supply will be done in line with SCC.

KoPT do not guarantee uninterrupted supply of water and the Contractor shall not be compensated for any delay or irregularity in supplying water. The Contractor shall have to arrange for the supply of water at his own cost during such periods.

However, water supply, if required for the **actual work (including erection, commissioning & cleaning work) at the site only** and / or **maintenance, repair & cleaning work** (required to be carried out at site during the "Defect Liability Period") will be provided free of cost. The Contractor shall have to make **all arrangements for laying of pipelines from the source(s) identified by KoPT, at their cost**.

### **8.26.2 Supply of Electricity:**

Supply of Electricity at the **Contractor's site office, store, workshop, assembly / erection yard, etc.** will be on **chargeable basis**. The Contractor shall have to make all arrangements, including **installation of Energy Meter and laying of Cables from the source(s) identified by KoPT, at their cost**. The Contractor will be responsible for maintenance and calibration of such Energy Meter also. Billing against **electricity charges** will be done in line with SCC.

KoPT do not guarantee uninterrupted supply of Electricity and the Contractor shall not be compensated for any delay or irregularity in supplying Electricity. The Contractor shall have to arrange for Electricity at his own cost during such periods.

However, Power supply, required for the **actual work (including erection and commissioning) at the site only** and/or **maintenance and repair** (required to be carried out at site during the "Defect Liability Period") will be provided free of cost. The Contractor shall have to make all arrangements for **laying of Cables from the source(s) identified by KoPT, at their cost**.

## **8.27 Use of ground and land/covered space for Contractor's establishment**

**8.27.1** The Contractor shall be allowed to use a suitable land (open space), which in the opinion of KoPT may be absolutely necessary for the proper and efficient execution of works. For this, a token lump sum licence fee of **₹10.00 per month or part thereof** will be charged during pendency of the contract and extension thereof, if any.

**8.27.2** On completion of work or termination of the contract, the Contractor shall have to clear away all their tools, plants, rubbish and other materials, **within a fortnight** and hand over vacant and peaceful possession of the same to KoPT, in a tidy and clean condition. The same license fee (₹10.00 per month or part thereof) will be applicable for this additional period (if any) for clearing the

space. If the Contractor fails to clear the space and handover the same to the Employer in a clean and tidy condition, within the period mentioned above, KoPT's "Schedule of Rate" will be applicable for the period beyond that.

**8.27.3** The Contractor shall be allowed to erect any temporary structures on this land [as stated in **GCC Clause No. 8.27.1**] for **office and / or store and / or workshop**, etc. and make all suitable arrangement for water supply, Electricity supply and sanitary arrangements for the same, at their own cost.

**8.27.4** In case the Contractor is interested in taking **covered space, office room**, etc. of KoPT for the purpose of making a site office and store in the Dock area, the same may also be allotted subject to availability. The rents for such covered spaces or office room of KoPT, to be allotted to the Contractor, shall have to be paid by the Contractor, as per the 'Schedule of Rent of KoPT, prevailing at that time. In addition to the rent, **water consumption charges** [as per **GCC Clause Nos. 8.26.1**] and **Electricity consumption charges** [as per **GCC Clause No. 8.26.2**] (if Electricity / water is supplied from KoPT sources) and other applicable charges, as per the notifications of **Tariff Authority of Major Ports (TAMP)**, have to be paid by the Contractor. The Contractor will be responsible for installation, maintenance and calibration of Water Meter and / or Energy Meter also.

## **8.28 Existing services**

**8.28.1** Drains, Pipes, Cables, overhead wires and similar services, whether above or below the ground, which may be encountered in the course of the work, shall be saved and kept harmless from injury and/or loss or damages by the Contractor, at their own costs and expenses, so that they continue to be in full and uninterrupted use to the Employer.

**8.28.2** The Contractor shall not store any materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services. The Contractor shall, at their own costs and expenses and without any delay, repair and make good, to the satisfaction of the Employer, any injury and/or loss or damage caused by the Contractor to the same.

## **8.29 Contractor to prepare working/ progress drawings**

**8.29.1** The Contractor shall provide 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.

## **8.30 Contractor's price is inclusive of all costs**

**8.30.1** Unless otherwise specified, the Contractor shall be deemed to have included in his bid / 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.

**8.31 Contractor is responsible for all construction process, except for correctness of design and specification formulated by the Engineer**

**8.31.1** 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.

**8.32 Contractor to submit his programme of work**

**8.32.1** 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.

**8.32.2** 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.

**8.33 Contractor to supervise the works**

**8.33.1** 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 Defect Liability Period (DLP). 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 **GCC Clause No. 8.16** hereof. The Contractor shall inform the Engineer or his Representative in writing about such representative/agent of him at site.

**8.34 Contractor is responsible for line, level, setting out, etc.**

**8.34.1** 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.

**8.35 Contractor is responsible to protect the work**

**8.35.1** From the commencement of the works till issue of the “Certificate of Completion of Work”, vide **GCC Clause No. 8.65** 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 be recoverable from the Contractor, in whatever manner 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 Defect Liability 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 during the Defect Liability Period.

**8.36 Contractor is responsible for all damages to other structures / persons caused by him in executing the work**

**8.31.1** 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.

**8.37 Fossils, Treasure troves, etc. are Trustees' property**

**8.37.1** The Contractor shall immediately inform the Engineer's Representative 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.

**8.38 Contractor to indemnify the Trustees against all claims for loss, damage, etc.**

**8.38.1** The Contractor shall be deemed to have indemnified the Trustees against all claims, demands, actions and proceedings and all costs arising there from on account of:

- (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 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.

### **8.39 Dismantled materials Trustees' property**

**8.39.1** Debris and materials, if obtained by demolishing any property, building or structure, in terms of the contract, shall remain the property of the Trustees.

### **8.40 Contractor's quoted rates / price must be all inclusive**

**8.40.1** The Contractor's quoted rates shall be deemed to have been inclusive of the following:

- (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 labourers and workers, local or otherwise, including payment for their wages, transport, accommodation, medical and all other statutory benefits and entry permits, wherever necessary.
- (e) Making arrangements, in or around the site, as per the requirements of Calcutta Municipality Corporation or other local authority or the Engineer or his Representative, for preventing
  - (i) spread of any infectious disease like smallpox, cholera, plague, malaria or dengue, 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 (sixteen) years.

### **8.41 Notice to Contractor**

**8.41.1** 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 bid or to the Contractor's Site Office or, in case of Trustee's enlisted Contractor, to the address as appearing in the Trustee's Register 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.

**8.42 Contractor not to publish photograph or particulars of work**

**8.42.1** 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.

**8.43 Contractor to provide facilities to outsiders**

**8.43.1** 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.

**8.44 Work to cause minimum possible hindrance to traffic movement**

**8.44.1** The work has to be carried out by the Contractor causing minimum hindrance for any maritime traffic or surface traffic.

**D. STAFF AND LABOUR**

**8.45 Engagement of staff and labour**

**8.45.1** The labour, as mentioned in the respective clauses, shall include all labourers of the approved sub-contractor(s), with respect to this contract.

**8.45.2** The Contractor shall have to make their own arrangements for the engagement of all staff and labour, for doing the work at site or in respect of or in connection with the execution of work, as also for the transport, housing, feeding. They shall have to ensure making payment to the above staff and labours, to be engaged by them (including the labours, to be engaged by the approved Sub-contractor, if any).

**8.45.3** KoPT's store shall mean any store of Haldia Dock Complex, situated at Haldia.

**8.45.4** It is expressly made clear that both before and after the completion of the work or termination of the contract, **KoPT shall have no liability, whatsoever, for the personnel to be engaged by the Contractor [or by the approved Sub-contractor(s)] for the work under this contract.**

**8.46 Labour Laws**

**8.46.1** The Contractor shall, at all times, during the pendency of the contract [including the period of making good/rectification of deficiencies/defects, if any], have to comply fully with all existing **Acts, Regulations and Byelaws**, including all **statutory amendments** and re-enactment of **State or Central Government** and other **Local Authorities** and any other enactments and acts that may be passed in future either by the **State or the Central Government or Local Authority**,

including **Workmen's Compensation Act, Labour Laws and Equal Remuneration Act, Factories Act, Minimum Wages Act, Contract Labour (Regulation & Abolition) Act**, etc., if applicable and/or as applicable.

- 8.46.2** If, as a result of the Contractor's failure, negligence, omission, default or non-observance of any provisions of any laws, the Employer is called upon by any authority to pay or reimburse or required to pay or reimburse any amount, the Employer shall be entitled to deduct the same from any moneys due or that become due to the Contractor under this contract or any other contract or otherwise recover from the Contractor any sums, which the Employer is required or called upon to pay or reimburse on behalf of the Contractor.

All **registration and statutory inspection fees**, in connection with labour engagement, with respect to this contract, shall have to be paid by the Contractor, if applicable and/or as applicable.

- 8.46.3** The Contractor shall have to, immediately after the occurrence of any accident, at or near the site or in connection with the execution of the work under the contract, report (over phone or otherwise) 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 have to report such accident to the Engineer, in writing (giving reference to the earlier communication made). Based on such report, necessary communication with the competent authority would be made whenever such a report is required by law.

- 8.46.4** For any accident occurred within the entire operational area covered under the contract, the Contractor shall have to arrange prompt investigation into the matter through recording of statement of the personnel witnessing the accident. Such "Accident Report", containing the findings, along with the statements so recorded, shall have to be forwarded by the Contractor to the Engineer at the earliest.

- 8.46.5** The Contractor shall have to provide full medical treatment to their staff & labourers, in case of "**Accident on Duty**", which will inter alia include their obligations under the **Workmen's Compensation Act, 1923**, including all amendments thereof.

The Employer shall in no manner be liable to the Contractor or any person engaged/employed by them [including that of Sub-contractor] or any other person, for injuries or death caused as a result of accidents occurred, either within or outside the site of work, under the contract. The Contractor shall be responsible for such contingencies and will make good all claims for compensation, claim by their personnel/workmen or the families of the sufferer(s), as the case may be, or as per the decision of the appropriate authority/tribunal or other involved persons.

- 8.46.6** The Contractor shall have to indemnify KoPT, in the event of KoPT being held liable to pay compensation for injury to any Contractor's servants or workmen [including that of Sub-contractor] under the **Workmen's Compensation Act, 1923**, as amended from time to time.

- 8.46.7** Whenever the contract comes to an end with the efflux of time or otherwise or is terminated, the Contractor shall be required to fulfil all their obligations towards their workmen in terms of applicable labour laws and submit necessary

documents towards such effect, to the Employer in support of the same. Any deposit, which may be lying with KoPT to their credit, will be liable to be applied for this purpose, if the Contractor fails to comply with the same. In case such documents are not furnished by the Contractor, the Employer will not release the **Performance Guarantee/ Security Deposit** and any other amount as may remain due to the Contractor

#### **8.47 Health and safety**

**8.47.1** In the event of any outbreak of illness or an epidemic nature, the Contractor shall have to comply with and carry out such regulations, orders & requirements, as may be made by the Government, or the local medical or sanitary authorities, for the purpose of dealing with and overcoming the same.

**8.47.2** The Contractor shall have to ensure safety of all their working personnel to the fullest compliance of the provisions of **general safety rules/regulations**, including **Dock Workers' (Safety, Health & Welfare) Regulations, 1986**.

The Contractor shall be solely responsible for consequences arising out of non-compliance or violation of safety rules/ regulations.

**8.47.3** The Contractor [including approved Sub-contractor(s)] shall have to provide (at their own expenses) all required **Personal Protection Equipment (PPE)** [such as **Helmets, Nose Masks, Hand Gloves**, etc.] & **Safety Gears** for all personnel and labourers engaged during the work and in case of their failing to do so, the Employer shall provide the same and recover the cost thereof from any amount due, or which may become due to the Contractor or from any amount lying with them or under their control.

#### **8.48 Labour licence**

**8.48.1** Within 7 (seven) days from the date of issuance of the order, the Contractor shall have to apply for **labour licence** for the maximum number of workers proposed to be deployed for this work. Necessary certificate shall be issued by the Engineer against a request from the Contractor.

**Photocopy of the application shall have to be furnished to the Engineer**, immediately. However, payment will be released only on furnishing the copy of the **Labour Licence** to the Engineer. However, such license should be kept valid throughout the actual duration of contract.

#### **8.49 Employees' Provident Fund & Employees' State Insurance**

**8.49.1** The Contractor should have their establishment (with respect to this contract) registered with the concerned authorities under the provision of **Employees' Provident Fund & Miscellaneous Provision Act, 1952** and **Employees' State Insurance Act, 1948**. The Contractor shall have to submit the proof of registration as mentioned above immediately after commencement of work.

**8.49.2** As per the above mentioned Act, the Contractor is liable for remittance of monthly subscription contribution in respect of **Employees' Provident Fund (EPF)** and **Employees' State Insurance (ESI)** for the workers engaged by them, wherever applicable. The Contractor shall have to submit the authenticated copy of the challans with respect to subscription / contribution of **Employees' Provident Fund** and **Employees' State Insurance** (against their respective Code Numbers issued by the **Employees' Provident Fund** and **Employees' State Insurance Authorities**) by 7<sup>th</sup> day of every English Calendar Month (during the

currency of the contract) along with the list of labourers for whom such deposits have been made.

Payment will be held up if the up-to-date **Employees' Provident Fund** and **Employees' State Insurance** remittance challan is not submitted in time.

**8.49.3** In case, registration with the EPF and ESI Authorities is not applicable for the employees of the Contractor [or for the employees of the Sub-contractor(s)], documentary evidence to establish non-applicability to be submitted by the Contractor.

**8.49.4** In case of sub-contracting any part of the work, above requirements should also be fulfilled by the approved Sub-contractor and necessary documents shall have to be submitted in time, as indicated above.

## **E. PLANT, MATERIALS AND WORKMANSHIP**

### **8.50 Materials to be supplied by the Employer**

**8.50.1** Regarding 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' Store [store of Haldia Dock Complex, situated at Haldia], 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.
- 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.
- 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.
- 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 bid/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.

- 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 19.25 % extra over the higher one of the followings:
- i) The issue rate of the materials at the Trustees' Stores, and
  - ii) The market price of the material on the date of issue, as would be determined by the Engineer.

## **8.51 Contractor's arrangement for execution of the work**

- 8.51.1** The Contractor will have to arrange and provide all types of materials, etc. [in line with the Technical Specification] throughout the execution of the contract.
- 8.51.2** KoPT will not take any responsibility regarding **non-availability** of any such materials for which Contractor is responsible as per contract. The Contractor shall have to assess the requirement of such materials and keep sufficient stock.
- 8.51.3** The Contractor shall have to provide all equipment, including tools, tackles, lifting machineries, air compressor, scaffolding arrangement, different vehicular transport, etc., necessary to execute the work.
- 8.51.4** All tools & machineries to be used by the Contractor should be suitable for the particular requirement (i.e. capacity should be adequate) and the same should be checked for fitness before use. They should maintain the said equipment properly to ensure their efficient working.
- 8.51.5** The Contractor shall, at their own costs and expenses, have to provide all labour, plant, haulage, transportation of plant and equipment to be used for executing the contract, all materials, stores, etc. (except the equipments & materials to be provided by KoPT, as per contract) required for efficiently carrying out the work to the satisfaction of the Employer.
- 8.51.6** The Contractor should use calibrated measuring & testing instruments and should also ensure revalidation of such calibration as and when required. In this regard, initially the Contractor shall have to submit a list of **measuring and testing instruments** (mentioning the period of validity of Calibration Certificates) to be used. The photocopies of the Calibration Certificates (including the revalidations) of the said measuring and testing instruments, shall have to be submitted to the Engineer.

## **8.52 Inspection and testing**

- 8.52.1** The Engineer or his authorised Representative shall have, at all reasonable time, access to the Contractor's premises or work site or other premises [if a part of the work is being executed there or some **maintenance repair** work (during **Defect Liability Period**) is being done there] and shall have the power, at all reasonable time, to **inspect, examine and test the materials and workmanship**, as well as the **documents, equipment, tools, measuring & testing instruments**, as applicable, in connection with the instant contract (including **Defect Liability Period**).
- 8.52.2** The Engineer or his authorised Representative, on giving 7 (seven) days' notice, in writing, to the Contractor, setting out any ground of objections, in

respect of the work, shall be at liberty to reject all or any material and/or workmanship in the subject of any of the said grounds of objection, which are not in accordance with the contract.

- 8.52.3** 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.
- 8.52.4** If found necessary, KoPT reserves the rights to get the materials inspected from a **Government or Government recognized Laboratory/Test House**.
- 8.52.5** 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.
- 8.52.6** The Employer may appoint a **Third Party Inspection Agency** , as detailed at SCC, 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, in part or as a whole ]. In that case The relevant Certificates shall be produced by the **Third Party Inspection Agency** to the Engineer or his authorised Representative.
- 8.52.7** The stage-wise technical inspection will be carried out by the representative of the Engineer [or **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].
- 8.52.8** 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**”.
- 8.52.9** 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 / or the Third Party Inspection Agency] , to accomplish such testing.
- 8.52.10** 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.
- 8.52.11** If, during inspection by the **Third Party Inspection Agency [if appointed by KoPT]**, 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 3<sup>rd</sup> time onwards shall have to be borne by the Contractor.** If the 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**

**8.52.12 Tests on completion:**

On **completion of installation**, the contractor with give a **7 (seven) days'** notice to the Engineer, 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. The procedure specified in SCC shall be followed in this respect.

**8.52.13** 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.

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

**8.53.1** The Engineer or his Representative shall have the power to inspect any material and work at any time and to order at any time

- a) 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,
- b) for the substitution of proper and suitable materials, or
- c) 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 (seven) days.

**8.54 Removal of materials on completion**

**8.54.1** The Contractor shall, on completion of the contract or when directed by the Employer, shall have to remove all plant, equipment, tools, materials, temporary constructions, etc. and rubbish garbage, waste, which may have accumulated during the execution of the contract, other than those permanently used into the work, at Employer's site.

**8.55 Workmanship and secrecy**

**8.55.1** The Contractor shall carry out the services in conformity with generally accepted norms and sound standards of Engineering. The Contractor shall be responsible for the technical soundness of the services rendered. In the event of any deficiency in those services, the Contractor shall promptly re-do the same, at no additional cost to the Employer.

**8.55.2** The Contractor shall use all the documents, drawings and other data & information, of proprietary nature, received from the Employer, solely for the

purpose of performing and carrying out the obligations on his part under the Agreement in the performance of the works for the project and maintain utmost secrecy, in this regard. The documents, drawings and other data & information, received from the Employer, shall not be used by the Contractor for any other purpose.

## **F. COMMENCEMENT, EXECUTION & COMPLETION OF WORK, HANDING OVER AND TAKING OVER**

### **8.56 Preliminary time to commence work and maintenance of steady rate of progress**

**8.56.1** The Contractor shall commence the work within 7 (seven) days of the receipt of Engineer's letter informing acceptance of the Contractor's bid / 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 Representative, time being deemed the essence of the contract on the part of the Contractor.

### **8.57 Contractor's site office**

**8.57.1** 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.

### **8.58 Contractor to observe Trustees' working hours**

**8.58.1** 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.

### **8.59 Contractor to supply all materials as per requirement of the Engineer or his Representative**

**8.59.1** 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

### **8.60 Materials and works**

**8.60.1** 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.

**8.61 Contractor to submit samples for approval**

**8.61.1** 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.

**8.62 Contractor to seek approval of Engineer or his Representative before covering up any portion of work**

**8.62.1** 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.

**8.62.2** 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.

**8.63 Contractor to suspend work on order from Engineer or his Representative**

**8.63.1** 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:

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

**8.63.2** 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.

**8.63.3** 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.

**8.64 Completion Certificate**

- 8.64.1** When the whole of the work [as detailed in **GCC Clause No. 8.65 (Completion period)**] has been completed to the satisfaction of the Engineer, the Contractor shall, within 21 (twenty one) days of submission of his application to the Engineer, be entitled to receive from him a certificate for completion of work as per the form furnished in **Section – IX-D**.

**8.65 Completion period**

- 8.65.1** All the jobs, as per contract, are to be completed within the period stipulated in the SCC.

**8.66 Taking over of the Contract job by KoPT**

- 8.66.1** The **Contract job** will be taken over by HDC, KoPT after completion of the works in accordance with the contract, having passed all the tests under “Tests on completion”.
- 8.66.2** However, the actual date of completion of the contract will be considered as per **GCC Clause No. 8.65 [Completion period]**.

**8.67 Defect Liability Period (DLP)**

- 8.67.1** “**Defect Liability Period**” shall mean the **Guarantee Period**, as specified in SCC.
- 8.67.2** During “**Defect Liability Period**” [as specified in SCC], the Contractor shall nominate 1 (one) 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, KoPT.
- 8.67.3** 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 over [as per GCC Clause No. 8.66 (Taking over of the Contract job by KoPT)] and before expiry of Defect Liability Period [as specified in SCC] and which arises either:
- a) from any defective materials, workmanship or design, or
  - b) from any act or omission of the Contractor done or omitted during the said period.

**8.68 Defects after taking over**

- 8.68.1** If any such defects shall appear or damage occur (as detailed in **8.67.3**), the Engineer shall forthwith inform the Contractor thereof, stating in writing the nature of defect or damage.

The provision of this clause shall apply to all replacements or renewals carried out by the Contractor to remedy defects and damage as if the said replacements and renewals had been taken over on the date they were completed to the satisfaction of Engineer. After the taking over, if the Contract job 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, as specified in SCC.

- 8.68.2** If any such defect or damage be not remedied by the Contractor within a reasonable time, HDC, KoPT may proceed to do the work at the Contractor’s risk and expense, but without prejudice to any other rights which HDC, KoPT may

have against the Contractor in respect of such defects.

- 8.68.3** 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.

**8.69 Extension of completion period and liquidated damage**

**8.69.1 Extension of completion period:**

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 **Force Majeure** condition (as per **GCC Clause No. 8.86**) or other special circumstances, of any kind, beyond the control of the Contractor or any other reason not attributable to the Contractor [including hindrance at site of work, causes indicated as "**Excepted Risks**", etc.] cause delay in completing the work, the Contractor shall apply to the Engineer, in writing, for suitable extension of completion period, within **7 (seven) 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**" (**GCC Clause No. 8.69.2** hereof) on the Contractor and his decision shall be binding on the Contractor. If an extension of completion period is granted by the Engineer, "**Liquidated Damage**" (**GCC Clause No. 8.69.2** hereof) 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 aforesaid.

**8.69.2 Liquidated Damage:**

If the Contractor fails to complete the work within the stipulated dates [as per **GCC Clause No. 8.65 (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 the Contract Price [excluding GST].

- 8.69.3** Without prejudice to any of their legal rights, the Trustees shall have the power to recover the said amount of compensation/damage, as per **GCC Clause No. 8.69.2** 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 **3 (three) days** notice, in writing, has been given to the Contractor by the Engineer or his Representative.

**G. CONTRACT PRICE , PAYMENT AND DEDUCTIONS**

## **8.70 Contract Price**

**8.70.1** Price charged by the Contractor for the related services performed under the contract shall not vary from the rates accepted by the Employer, based on the bid/offer of the successful bidder and stated in the “Letter Of Acceptance”, with the exception of any price adjustment, if provided for in the contract.

**8.71.2** Changes in statutory taxes & duties will be adjusted time to time.

**8.71.3** No claim whatsoever of the Contractor for their man & material resources remaining idle for any reason or for any other expenses incurred by them due to the flow of work not being continuous or for stoppage of work, will be entertained by the Employer.

## **8.71 Terms of payment**

### **8.71.1 Payment of Goods & Services Tax (GST):**

Amount of GST will be borne by HDC, KoPT on production of suitable document(s) by the Contractor.

### **8.71.2 Time of payment:**

The Contractor shall have to submit **bills in triplicate** to the Engineer, in accordance with the stage-wise payments specified in **SCC**. In normal circumstances, payment of the bills, accompanied by **Inspection Certificates** & other relevant documents, duly recommended by the Engineer, will be passed within 30 (thirty) days from the date of receipt of such bills, if found in order.

### **8.71.3 Income Tax deduction:**

**Income Tax**, if any, as per the relevant provision of the Income Tax Act, shall be **deducted at source** from amount payable to the Contractor.

### **8.71.4 No interest on account of delayed payments:**

Any claim for interest will not be entertained by KoPT with respect to any delay on the part of KoPT for making payment, or for any dispute. The decision of the Engineer is final in such matters.

## **8.72 Extra expenses incurred by the Employer**

**8.72.1** Any extra expenses incurred in connection to the work by the Employer in the performance of the work owing to the neglect or omission on the part of the Contractor in any of the case mentioned in this contract shall be deducted from any sum due or which may thereafter become due to the Contractor or from any amount lying with them or under their control or they may be called upon to pay the amount of such extra expense to such person or persons as the Employer may appoint to receive the same and in the event of the Contractor failing to make such payment, the said amount shall be recoverable from them in such manner as the Employer may determine,

## **8.73 Recovery of deducted amount**

**8.73.1** Without prejudice to any of their legal rights, the Trustees shall have the power to recover the amount of **DEDUCTION**, from any money due or likely to become due to the Contractor. Such payment or deduction shall not relieve the Contractor from their obligation to complete the work or from any of their other obligations /

liabilities under the contract.

## **8.74 Variation and its valuation**

- 8.74.1** 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:
- 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.
- 8.74.2** 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.
- 8.74.3** Provided always that written order of the Engineer shall not be required for increase or decrease in the quantity of any work up to 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 "Price Schedule". 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.
- 8.74.4** 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.
- 8.74.5** 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 or work omitted by his order.
- 8.74.6** 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 bid), 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.
- 8.74.7** 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 **GCC Clause Nos. 8.74.5 & 8.74.6**, 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.

## **H. TERMINATION BY EMPLOYER**

### **8.75** Notice to correct

**8.75.1** If the Contractor fails to carry out any of their obligations under the contract, the Engineer may give notice to the Contractor, requiring them to make good the failure and to remedy the same within a specified reasonable time.

### **8.76** Termination by Employer

**8.76.1** The Employer shall be entitled to terminate the contract if:

- a) the Contractor fails to comply with **GCC Clause No. 8.20 [Performance Guarantee / Security Deposit ]**  
or  
with a notice under **GCC Clause No. 8.75 [Notice to correct]**,
- b) the Contractor **abandons** the work, or **repudiates** the contract, or otherwise plainly demonstrates the intention not to continue performance of their obligations under the contract,
- c) the Contractor, without reasonable or lawful excuse under this contract,
  - i) fails to proceed with the work, **within 14 days** from the scheduled date for commencement of work, in accordance with **GCC Clause No. 8.56 [Preliminary time to commence work and maintenance of steady rate of progress]**,
  - ii) keeps the work suspended for **at least 14 days**, despite receiving Engineer's written notice to proceed with the work,  
or
  - iii) fails to comply with a notice issued regarding rejection of material(s)/work and/or remedial work, **within 28 days** after receiving it,
- d) the Contractor **assigns/sub-contracts the whole of the work**  
or  
**sub-contracts any portion of the work**, without the required consent, in line with **GCC Clause No. 8.22**.
- e) the Contractor becomes **bankrupt** or **insolvent**, goes into liquidation, have a receiving or administrative order made against them, compounds with their creditors, or carries on business under a receiver, trustees or manager for the benefit of their creditors, or if any act is done or event occurs which (under applicable laws) has a similar effect to any of these acts or events,
- f) the Contractor gives or offers to give (directly or indirectly) to any person any bribe, gift, gratuity, commission or other thing of value, as an inducement or reward,
  - i) for doing or forbearing to do any action in relation to the contract, or

- ii) for showing or forbearing to show favour or disfavour to any person in relation to the contract,  
or, if any of the Contractor's personnel, Agents or Sub-contractors gives or offers to give (directly or indirectly) to any person any such inducement or reward as is described in this **sub-paragraph (f)**. However, lawful inducement and reward to the Contractor's personnel shall not entitle termination
- g) the Contractor fails to execute the work in accordance with the contract  
or  
persistently or flagrantly neglects to carry out their obligations under the contract.
- h) the Contractor fail to make payment of wages to their personnel in relation to this contract,
- i) the Contractor fails to carry out the work satisfactorily (as stated in these bidding documents or otherwise decided by the Engineer) or may not be able to complete the work within the agreed period on account of Contractor's lapses.
- j) any accident occurs due to improper way of working by the Contractor's personnel, or
- k) any misconduct done by Contractor's personnel (including that of Agents or Sub-contractors) to KoPT's employees.

In any of these event or circumstances, the Employer may, upon giving a **minimum 14 days' notice** [communicated by the Engineer] to the Contractor, **terminate the contract** and expel the Contractor from the site, without being liable for any compensation to the Contractor. However, in case of **sub-paragraph (e) or (f)**, the Employer may, by notice [communicated by the Engineer], terminate the contract immediately.

The Employer's election to terminate the contract shall not prejudice any other rights of the Employer, under the contract or otherwise.

**8.76.2** Upon receipt of the letter of termination of work, which may be issued by the Engineer on behalf of the Employer, the Contractor shall have to leave the site of work and deliver any **required goods**, all **Contractor's documents**, and other **design documents**, made by or for them, all the **Trustees' tools, plant and materials** issued to them, at the place to be ascertained by the Engineer, **within 7 days** of receipt of such letter. However, the Contractor shall use their best efforts to comply immediately with any reasonable instructions included in the notice

- i) for the assignment of any Sub-contractor,  
and
- ii) for the protection of life or property or for the safety of the equipment/work.

The Contractor shall not be released from any of their obligations or liability under the contract and the rights & authorities conferred on the Employer and Engineer, by the contract, shall not be affected.

**8.76.3** Upon such termination of work, the Employer shall have the power to complete the work by **themselves** and/or through **any other agency** at the **Contractor's risk & 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 they duly completed the whole of the work in accordance with the contract.**

The Employer or such other agency may use, for such completion, so much of the Contractor's documents, other design documents, made by or on behalf of the Contractor, Contractor's equipment, temporary work, plant & materials, as they think proper.

Upon completion of the work, or at such earlier date, as the Engineer shall give notice that the Contractor's equipment and temporary work will be released to the Contractor at or near the site, the Contractor shall remove or arrange removal of the same from such place without delay and at their risk & cost. However, if by this time the Contractor has failed to make a payment due to the Employer, these items may be sold by the Employer in order to recover this payment. Any balance of the proceeds shall be paid to the Contractor.

### **8.77 Valuation at date of termination**

- 8.77.1** As soon as practicable after a notice of termination under **GCC Clause No. 8.76 [Termination by Employer]**, has taken effect, the Engineer shall proceed in accordance with **GCC Clause No. 8.19 [Determinations]** to agree or determine the value of the work, goods & Contractor's documents, and any other sums due to the Contractor for work executed, in accordance with the contract. The value of such work (executed in accordance to the Contract) shall be determined based on measurements of actual work done and approved rate(s), as per contract or other rates, as decided by the Engineer. The Engineer's decision, in such case, shall be final, binding and conclusive.

### **8.78 Payment after termination**

- 8.78.1** After a Notice of termination, under **GCC Clause No. 8.76 [Termination by Employer]** has taken effect, the Employer may

- a) give notice to the Contractor, indicating the particulars, for which Employer is entitled to any payment under any Clause or otherwise in connection with the contract, and or any extension of the **Defect Notification Period**.

However, Notice is not required for payments due under **GCC Clause No. 8.26 [Supply of water and Electricity]**, under **GCC Clause No. 8.27 [Use of ground and land/covered space for Contractor's establishment]**, or for other services requested by the Contractor,

- b) withhold further payments to the Contractor until the cost of execution, completion and remedying of any defects, damage, and all other costs incurred by the Employer, have been established, and / or
- c) recover from the Contractor any losses and damages incurred by the Employer and any extra costs of completing the work, after allowing for any sum due to the Contractor under **GCC Clause No. 6.77 [Valuation at date of termination]**. After recovering any such losses, damages and extra costs, the Employer shall pay any balance to the Contractor.

### **8.79 Employer's entitlement to termination for convenience**

- 8.79.1** The Employer, by notice [communicated by the Engineer] sent to the Contractor, may terminate the Contract, in whole or in part, at any time **for Employer's**

**convenience.** Such termination shall take effect **28 days** after the date on which the Contractor receives this notice or the Employer returns the Performance Guarantee. The notice of such termination shall specify that termination is for **Employer's convenience**, the extent to which performance of the Contractor under the contract is terminated, and the date upon which such termination become effective.

The Employer shall not terminate the contract under this Sub-clause in order to execute the work exclusively by themselves or to arrange for work to be executed exclusively by another Contractor or to avoid a termination of the contract by the Contractor under **GCC Clause No. 8.82 [Termination by Contractor]**.

After such termination, the Contractor shall proceed in accordance with **GCC Clause No. 8.83 [Cessation of work and removal of Contractor's equipment]** and shall be paid in accordance with **GCC Clause No. 8.90 [Optional termination, payment and release]**.

## **8.80 Corrupt or fraudulent practices**

**8.80.1** If the Employer determines that the Contractor has engaged in **corrupt, fraudulent, collusive, coercive, or obstructive** practices, in competing for or in executing the Contract, then the Employer may, after giving **14 days notice** to the Contractor, terminate the Contractor's employment under the Contract and expel them from the Site, and the provisions of **GCC Clause Nos. 8.75 to 8.78** shall apply as if such expulsion had been made under **GCC Clause No. 8.76 [Termination by Employer]**.

Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the work, then that employee shall be removed in accordance with **GCC Clause No. 8.21 [Contractor's personnel and Contractor's representative]**.

For the purposes of this clause:

- i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ii) "fraudulent practice" is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- iii) "collusive practice" is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- iv) "coercive practice" is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
- v) "obstructive practice" is deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede the Employer investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and / or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation.

## **I. SUSPENSION AND TERMINATION BY CONTRACTOR**

### **8.81 Contractor's entitlement to suspend work**

- 8.81.1** The Contractor may, if the Employer fails to pay the Contractor the amount due under any certificate of the Engineer **within 28 days** after the expiry of the time stated in **GCC Clause No. 8.71 [Terms of payment]** within which payment is to be made, subject to any deduction that the Employer is entitled to make under the Contract, after giving 28 days' prior notice to the Employer, with a copy to the Engineer, suspended work or reduce the rate of work.
- 8.81.2** If the Contractor subsequently receives the due payment (as described in the relevant Clause and in the above notice) before giving a notice of termination, the Contractor shall resume normal working as soon as is reasonably practicable.
- 8.81.3** If the Contractor suspends work or reduces the rate of work in accordance with the provisions of this Clause and thereby suffers delay, the Engineer shall, after due consultation with the Contractor, determine any extension of time or minimum criteria for satisfactory performance, to which the Contractor is entitled and shall notify the Contractor accordingly.

### **8.82 Termination by Contractor**

- 8.82.1** The Contractor will be entitled to terminate the Contract if:
- a) the Contractor does not receive the reasonable evidence within **42 days after** giving notice under **GCC Clause No. 8.81 [Contractor's entitlement to suspend work]** in respect of a failure of the Employer to pay the Contractor the amount due,
  - b) the Employer obstruct or refuse any required approval to the issue of any such certificate, which is essentially required for further progress of the work without notifying any reason for such obstruction or refusal for a unreasonably long period of time, or
  - c) the Employer become bankrupt or insolvent, go into liquidation, or enter into composition with the creditors,
- or
- d) the Employer give notice to the Contractor that for unforeseen reasons, due to economic dislocation, it is impossible for them to continue to meet their contractual obligations.

In any of these events or circumstances, the Contractor may, upon giving **28 days' notice** to the Employer (with a copy to the Engineer), terminate the Contract.

The Contractor's election to terminate the Contract shall not prejudice any other rights of the Contractor, under the Contract or otherwise.

### **8.83 Cessation of work and removal of Contractor's equipment**

- 8.83.1** After a notice of termination under **GCC Clause No. 8.79 [Employer's entitlement to termination for convenience]**, **GCC Clause No. 8.82 [Termination by Contractor]** or **GCC Clause No. 8.90 [Optional termination]**,

**payment and release]** has taken effect, the Contractor shall promptly:

- a) cease all further work, except for such work as may be necessary and instructed by the Engineer for the purpose of making safe or protecting those parts of the work already executed and any work required to leave the site in a clean and safe condition.
- b) hand over all construction documents, Plant and Materials for which the Contractor has received payment.
- c) hand over those other parts of the Works executed by the Contractor up to the date of termination
- d) remove all Contractor's equipment, which is on the site and repatriate all their staff and labour from the site.

and

- e) remove all other goods from the site, except as necessary for safety, and leave the site.

Any such termination shall be without prejudice to any other right of the Contractor under the contract.

#### **8.84 Payment on termination**

**8.84.1** After a notice of termination under **GCC Clause No. 8.82 [Termination by Contractor]** has taken effect, the Employer shall promptly:

- a) return the Performance Guarantee / Security Deposit to the Contractor
  - b) pay the Contractor in accordance with **GCC Clause No. 8.90 [Optional termination, payment and release]** ,
- and
- c) pay to the Contractor the amount of any loss or damage sustained by the Contractor as a result of this termination.

### **J. INSURANCE**

#### **8.85 General requirements for insurances**

**8.85.1** The contractor during the contract period shall provide for insurance of 110% of the contract value including manning upto the commissioning and taking over of the installation.

### **K. FORCE MAJEURE**

#### **8.86 Definition of Force Majeure**

**8.86.1** In this clause “**Force Majeure** “ means an exceptional event or circumstance

- a) which is beyond the control of the Employer and the Contractor,
- b) which such party (Employer / Contractor) could not reasonably have provided against before entering into the contract,
- c) which, having arisen, such party could not reasonably have avoided or overcome,

and

- d) which is not attributable to other party.

**Force Majeure** may include, but not limited to, exceptional events or circumstances of the kind listed below, so long as conditions a) to d) above are satisfied:

- i) **war, hostilities** (whether war be declared or not) , **invasion, act of foreign enemies;**
- ii) **rebellion, terrorism, sabotage by persons other than the Contractor's personnel, revolution, insurrection , military or usurped power, or Civil War;**
- iii) **riot, commotion, disorder, strike or lockout by persons other than the Contractor's personnel;**
- iv) **munitions of war, explosive materials, ionisation radiation or contamination by radio-activity,** except as may be attributable to the Contractor's use of such munitions, explosives, radiations or radio-activity;
- v) **natural catastrophes** such as **earthquake, tsunami** (caused by earthquake at the ocean bed),**fire, floods, hurricane, cyclone, typhoon or volcanic activity,**

and

- vi) **pressure waves** caused by air craft or other aerial devices travelling at sonic or supersonic speed at the site of the work.

## **8.87 Notice of Force Majeure**

**8.87.1** If a party is or will be prevented from performing its obligations under the Contract by Force Majeure, then it shall give notice to the other party of the event or circumstances constituting the Force Majeure and shall specify the obligations, the performance of which is or will be prevented. The notice shall be given **within 48 (forty eight) hours** of the alleged beginning of the relevant event or circumstance constituting Force Majeure, giving full particulars and satisfactory evidence.

The party shall, having given notice, be excused performance of its obligations for so long as such Force Majeure prevents it from performing them.

Notwithstanding any other provision of this clause, Force Majeure shall not apply to obligations of either party to make payments to the other party under the contract.

## **8.88 Duty to minimise delay**

**8.88.1** Each party shall at all times use all reasonable endeavours to minimise any delay in the performance of the contract as a result of Force Majeure.

A Party shall give notice to the other party when it ceases to be affected by the Force Majeure, **within 48 (forty eight) hours** of such ending.

## **8.89 Consequences of Force Majeure**

**8.89.1** If the Contractor is prevented from performing its substantial obligations under the Contract by Force Majeure of which notice has been given under **GCC Clause No. 8.87 [Notice of Force Majeure]**, and suffers delay and/or non-performance as per the contractual obligations, by reason of such Force Majeure, the Contractor shall be entitled, subject to **GCC Clause No. 8.91 [Engineer's decision]**, to:

- a) an extension of time for any such delay, if completion is or will be delayed, under **GCC Clause No. 8.69 [Extension of completion period and liquidated damage]**,  
and
- b) non-imposition of penalty due to non-performance as per the contractual obligations.

After receiving this notice, the Engineer shall proceed in accordance with **GCC Clause No. 8.19 [Determinations]** to agree or determine these matters.

## **8.90 Optional termination, payment and release**

**8.90.1** If the execution of all the work in progress is prevented for a **continuous period of 84 days** by reason of **Force Majeure** of which notice has been given under **GCC Clause No. 8.87 [Notice of Force Majeure]**, or for **multiple periods which total more than 140 days** due to the same notified Force Majeure, then either party may give to the other party a notice of termination of the contract. In this event, the **termination shall take effect 7 days after the notice is given**, and the Contractor shall proceed in accordance with **GCC Clause No. 8.83 [Cessation of work and removal of Contractor's equipment]**.

Upon such termination, the Engineer shall determine the value of the work done and issue a payment certificate which shall include:

- a) The amounts payable for any work carried out for which a price is stated in the Contract;
- b) the cost of plant and materials ordered for the work which have been delivered to the Contractor, or of which the Contractor is liable to accept delivery. Such Plant and Materials shall become the property of (and be at the risk of) the Employer when paid for by the Employer and the Contractor shall place the same at the Employer's disposal;
- c) any other cost or liability, which in the circumstances was reasonably incurred by the Contractor in the expectation of completing the Works;
- d) the **reasonable Cost** of removal of temporary work and Contractor's equipment from the site and the return of such items to the Contractor's premises,  
  
and
- e) the reasonable cost of repatriation of the Contractor's staff and labour employed wholly in connection with the work at the date of such termination.

## **L. CLAIMS, DISPUTES AND ARBITRATION**

### **8.91 Engineer's decision**

**8.91.1** If a dispute of any kind whatsoever arises between the Employer and the Contractor in connection with, or arising out of, the contract or the execution of the works, whether during the execution of the works or after their completion and whether before or after repudiation or other termination of the contract, including any dispute as to any opinion, instruction, determination certificate or valuation of the Engineer, the matter in dispute shall, in the first place, be referred, in writing, to the Engineer within **30 (thirty) days**, with a copy to the other party. Such reference shall state that it is made pursuant to this clause. No later than the **thirtieth day** after the day on which he received such reference, the Engineer shall give notice of his decision to the Employer and the Contractor. Such decision shall state that it is made pursuant to this clause.

Unless the contract has already been repudiated or terminated, the Contractor shall, in every case, continue to proceed with the works with all due diligence and the Contractor and the Employer shall give effect forthwith to every such decision of the Engineer unless and until the same shall be revised, as hereinafter provided, in an amicable settlement or an arbitral award.

If either the Employer or the Contractor be dissatisfied with any decision of the Engineer, or if the Engineer fails to give notice of his decision on or before the **thirtieth day** after the day on which he received the reference, then either the Employer or the Contractor may, on or before the **seventieth day** after the day on which he received notice of such decision, or on or before the seventieth day after the day on which the said period of thirty days expires, as the case may be, give notice to the other party, with a copy for information to the Engineer, of his intention to commence arbitration, as hereinafter provided, as to the matter in dispute. Such notice shall establish the entitlement of the party giving the same to commence arbitration, as hereinafter provided, as to such dispute and, subject to **GCC Clause No. 8.94 (Failure to comply with Engineer's decision)**, no arbitration in respect thereof may be commenced unless such notice is given.

If the Engineer has given notice of his decision as to a matter in dispute to the Employer and the Contractor and no notice of intention to commence arbitration as to such dispute has been given by either the Employer or the Contractor on or before the **seventieth day** after the day on which the parties received notice as to such decision from the Engineer, the said decision shall become final and binding upon the Employer and the Contractor.

## **8.92 Amicable settlement**

**8.92.1** Where notice of intention to commence arbitration as to a dispute has been given in accordance with **GCC Clause No. 8.91 (Engineer's decision)** above, both parties shall attempt to settle the dispute amicably before the commencement of arbitration. However, unless both parties agree otherwise, arbitration may be commenced on or **after the fifty-sixth day after the day on which a notice of intention to commence arbitration of such dispute was given**, even if no attempt at amicable settlement thereof has been made.

## **8.93 Arbitration**

**8.93.1** Any dispute in respect of which

- a) the decision, if any, of the Engineer, has not become final and binding pursuant to **GCC Clause No. 8.91 (Engineer's decision)** and

- b) amicable settlement has not been reached within the period stated in **GCC Clause No. 8.92 (Amicable settlement)**,

shall be finally settled by arbitration, in accordance with the **Arbitration and Conciliation Act, 1996 (considering its amendment in 2015)** or any statutory modification or re-enactment thereof and rules made there under and for the time being in force. The **Arbitration Tribunal** shall be composed as per provision of the **Arbitration and Conciliation Act, 1996 (considering its amendment in 2015)** or any statutory modification or re-enactment thereof and rules made there under and for the time being in force.

**8.93.2** In connection with the instant contract:

- a) the place of arbitration shall be **Kolkata** or **Haldia**, West Bengal, India,  
b) the arbitration shall be conducted in **English language**,  
and  
c) the fees, if any, of the Arbitrators, if required to be paid before the award of work in respect to disputes is made and published, shall be shared equally by each of the parties

**8.93.3** The Arbitrators shall have full power to open up, review and revise any certificate, determination, instruction, opinion, valuation or decision of the Engineer, relevant to the dispute. Nothing shall disqualify representatives of the parties and the Engineer from being called as a witness and giving evidence before the Arbitrators on any matter, whatsoever, relevant to the dispute.

**8.93.4** Neither party shall be limited in the proceedings before such Arbitrators to the evidence or arguments put before the Engineer for the purpose of obtaining his said decision pursuant to **GCC Clause No. 8.91 (Engineer's decision)**. No such decision shall disqualify the Engineer from being called as a witness and giving evidence before the Arbitrators on any matter whatsoever relevant to the dispute.

**8.93.5** Arbitration may be commenced prior to or after completion of the works, provided that the obligations of the Employer, the Engineer and the Contractor shall not be altered by reason of the arbitration being conducted during the progress of the works.

**8.94** **Failure to comply with Engineer's decisions**

**8.94.1** Whether neither the Employer nor the Contractor has given notice of intention to commence arbitration of dispute within the period stated in **GCC Clause No. 8.91 (Engineer's decision)** and the related decision has become final and binding, either party may, if the other party fails to comply with such decisions, and without prejudice to any other rights it may have, refer the failure to arbitration, in accordance with **GCC Clause No. 8.93 (Arbitration)**. The provision of **GCC Clause No. 8.91 (Engineer's decision)** and **GCC Clause No. 8.92 (Amicable settlement)** shall not apply to any such reference.

**8.95** **Progress of work not to be interrupted**

**8.95.1** The Contractor must, at all the times, fulfil their obligations under the contract and shall not slow down or stop the progress of work during the period any dispute is under settlement either through reference to the Engineer or through arbitration, pursuant to the preceding clauses. Even if the works to be carried out during such a period involve matters under dispute, the Contractor shall nevertheless proceed with the works as per direction of the Engineer, pending

settlement of the dispute. Failure of the Contractor, in this respect, shall constitute default on their part and render them liable to actions under the provisions of **GCC Clause No. 8.76 [Termination by Employer]**.

## **SECTION – IX**

### **Special Conditions of Contract**

#### **1.0 Supply of Electricity:**

**Electricity will be provided free of cost for maintenance work. However, for office use, electricity charges** will have to be paid (adjusted from the contractor's bill) by the contractor and the charges for the same 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 notifications 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, 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).

#### **2.0 Supply of water:**

Supply of water, if required for maintenance purpose, would be supplied at free of cost. However, for office use, water charges will have to be paid( adjusted from the contractor's bill) by the contractor against 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 **KoPT**, 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).

#### **3. Contract period (SCC)**

The contract period will be of 2 (Two) years with a provision for extension of one 1 (year), from the date of commencement of work. A year means 12 (twelve) calendar months.

#### **4. Price variation (SCC)**

No price variation is allowed during 2 (Two) years tenure of the contract. However, if the contract is extended for another 1 (One) year, as per tender provision, price variation shall be allowed. (i.e. if the date of commencement of work is say 01.01.2019, then the price variation shall be allowed after 01.01.2021)

The contract price shall be adjusted, if and only if the contract is extended, in accordance with the following escalation formula or 10%, whichever is lower:

**5. Facilities to be provided by the Employer/ Employer's obligations (SCC)**

$$P_r = P_o / 100 (15 + 30 M_n/M_o + 55 L_n/L_o).$$

where;

$P_r$  = Adjusted price.

$P_o$  = Price accepted. [Price accepted shall mean that the contract price, as indicated in the LOI/LOA and valid for the 1<sup>st</sup> year of contract, counted from the date of commencement of work.]

$M_n$  = Index Number of Wholesale Price in India (Average) for Machinery and Machine Tools, as applicable on the 1<sup>st</sup> day of the contract year (considering the date of commencement of work), published in RBI Bulletin.

$M_o$  = Index Number of Wholesale Price in India (Average) for Machinery & Machine Tools as applicable on the base date i.e. due date of submission of bid, published in RBI Bulletin.

$L_n$  = Consumer Price Index Number for Industrial Workers (All India Average) as published in RBI Bulletin, applicable on the 1<sup>st</sup> day of the contract year (considering the date of commencement of work).

$L_o$  = Consumer Price Index Number for Industrial Workers (All India Average) as published by RBI Bulletin, as applicable on the base date i.e. due date of submission of bid.

$M_o$  and  $L_o$  shall remain unchanged during the contract period.

- In the above price escalation formula, value for  $M_n/M_o$  and  $L_n/L_o$  shall be taken considering 2 (two) digits after decimal and price adjustment shall be calculated accordingly.
- The above price escalation will also be applicable for any extension of the contract period.
- In case of delay in publication of RBI Index, the previous year's escalation will continue provisionally, subject to adjustment after publication of the RBI Index.

KoPT will separately allot space (covered/open) for setting up office, store and workshop for maintenance of equipment, as may be required by the Contractor, for fulfilling all the obligations of the contract. Such allotment will be made at the rate provided in the prevailing Schedule of Rent of KoPT's land and buildings at Haldia, including annual escalation thereof.

Unless specified otherwise, KoPT will provide electricity and water to the Contractor, as may be

required, on chargeable basis, from its available sources. If required, the Contractor may have to lay their own water/electric line, from nearest KoPT source up to their place of requirement, for which KoPT will grant way leave license, on chargeable basis.

Regarding electricity and water supply, necessary meters should be installed by the Contractor at his own cost.

Supply of electricity and water for maintenance / repair work of various equipment will be provided on free of cost.

Electricity charges will be determined on the basis of chargeable unit (kWh) [actual unit (kWh) consumed (recorded through Energy Meter) + 3% (transformation loss) on actual unit consumed] and chargeable maximum demand (in case of 3.3 kV supply) [actual maximum demand recorded + 3% (transformation loss) on actual maximum demand recorded] and prevailing rate of West Bengal State Electricity Distribution Company Ltd (WBSEDCL), from time to time. In case of 3.3 kV supply, applicable rate would be 11 kV commercial rate of WBSEDCL, prevailing from time to time. Billing will be done on the basis of electricity charges and overhead charges @ 19.25% [on the aforesaid electricity charges] as per notifications of TAMP. Electricity readings will be collected on monthly basis.

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 on receipt of bills from the Finance Division of HDC, KoPT. 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 bills.

KoPT do not guarantee uninterrupted supply of electricity and the Contractor shall not be compensated for any delay or irregularity in supply of electricity.

The Contractor will be allowed to install telephone(s) and other communication arrangements, within the Dock area, for communication purpose, at their own cost and arrangement.

Medical facility will not be provided by HDC, KoPT to the Contractor. However, the Contractor's personnel can be provided with medical facilities at HDC Hospital, in emergency cases only, on payment basis.

The Contractor shall have to obtain required RFID based permits/licenses for its employees, workmen, security personnel, vehicles, tools and tackles, equipment and accessories etc. [including that of his

1.16            **Drawings  
and manuals of  
the plant (SCC)**

Sub-contractor(s)], for entry into the Dock area, following the procedure of KoPT in vogue at HDC. The required permits/licenses will be issued on chargeable basis.

Administrative support only, for obtaining clearance from any statutory authority, shall be provided by HDC, KoPT.

Drawings, specification and manuals of the plant, equipment, buildings, Sub-stations, etc., whatever are available with HDC, may be handed over to the Contractor as per requirement, on request, as deemed necessary by the "Engineer". But this will not be an obligation to HDC. It is the responsibility of the Contractor to keep such drawings, specification and manuals of the plant, equipment, buildings, Sub-stations, etc. in safe custody, if provided, and make a plant information library, keeping all such items satisfactorily indexed. Photos of important activities may also be kept. The Contractor is also responsible for preparing drawings afresh for missing drawings or non-available drawings and updating the plant drawings, on a regular basis, to ensure that they are always maintained in a current state. However, the drawings, specification, manuals, programmes for PLCs, etc. are the property of HDC and their secrecy shall be maintained by the Contractor. The same should be utilized only for the scopes under contractual obligations and the same shall be returned to HDC on completion of the contract. Existing Intellectual property law at the time will be applicable in this regard.

1.17            **Deduction  
on default (SCC)**

Availability factor of machines, equipment and systems, as per norms, on demand, carrying out proper maintenance, attending breakdown in time (rectification of faults), inventory management with respect to consumable and following the safety aspects, statutory norms and regulations are the essence of this contract. Therefore, the Contractor shall meet the performance parameters/norms/obligations pursuant to the contract. Failure on the part of the Contractor to comply with the requirements shall attract deductions on account of under-performance.

**AVAILABILITY FACTOR OF MAIN SYSTEM:**

The Contractor shall ensure that the machines, equipment/ system are available on demand all the time. The Contractor shall guarantee an availability factor of 90% in a given month for the main system, i.e. shipping streams and receiving streams, on demand.

The percentage of availability shall be calculated as under:

A = Total demand time.

B = Stoppages on account of the Contractor during the demand time. [**Non-availability period (in hour) of machines, equipment/ system**]

% of Availability = { ( A - B ) / A } x 100

**DEDUCTION ON ACCOUNT OF NON-AVAILABILITY OF AVAILABILITY FACTOR:**

Failure on the part of the Contractor to meet the availability of 90% shall attract a deduction due to under-performance on monthly basis and to be deducted from the monthly bill.

% of availability would be calculated, on a monthly basis, for all machines, equipment/ system utilized during the day, taken together.

The deduction for under-performance shall be as follows:

<u>Machines, equipment/ system</u>	<u>Deduction</u>
90% and above	NIL
For subsequent each 1% less than 90%	0.5% of total monthly bill for the period of non-achieving 90% subject to maximum 10% of monthly bill.

The deduction shall be made from the quoted amount per month against maintenance of machines, equipment/ system.

**DEDUCTION DUE TO VIOLATION OF SAFETY NORMS:**

The Contractor shall comply with all the requirements of safety regulations as applicable and comply, in all respect, with all applicable laws of any duly constituted authority in India. HDC is ISO certified as well as ISPS compliant. The Contractor shall ensure that all actions of the Contractor comply with ISO and ISPS requirements.

Without any prejudice, any violation of safety requirements will make the Contractor liable for a deduction of Rs. 5,000/- for the 1<sup>st</sup> violation, Rs. 10,000/- for the 2<sup>nd</sup> violation and Rs. 25,000.00 for the 3<sup>rd</sup> violation. For any further violation(s), over and above a penalty of Rs. 50,000.00, the Contractor may be liable to be debarred from further execution of the contract, i.e. HDC would reserve the right to terminate the contract.

## **EVALUATION OF YEARLY PERFORMANCE:**

The performance of the Contractor shall be judged, depending upon fulfillment of obligations of the contract, such as maintaining the desired level availability machines, equipment/ system of plant, inventory management with respect to consumable, etc.

Failure on the part of the Contractor to comply with the requirements shall attract deductions on account of defaults.

The overall performance of the Contractor shall be treated as satisfactory, if the total deduction amount on default in a contract year does not exceed 10% of the contract price in the concerned contract year.

If the above condition is not met with, i.e., the overall performance of the Contractor is not found to be satisfactory (as per the above criteria), the Contractor would be given an opportunity to improve performance within the next year of the contract.

However, if the overall performance of the Contractor is still not found satisfactory, i.e. for 2 (two) consecutive years, the Contractor may be liable to be debarred from further execution of the contract, i.e., HDC would reserve the right to terminate the contract.

- **RESPONSIBILITY TO RECTIFY LOSS OR DAMAGE:**

If any loss or damage happens to the works/property of HDC or any part thereof, due to negligence of the Contractor, for which the Contractor is supposed to take care thereof during the period of the contract, the Contractor shall, at his own cost and arrangement, rectify such loss or damage to the works/property of HDC, to the satisfaction of HDC.

In the event of an emergency, where, in the judgment of HDC, delay would cause serious loss or damage, repairs or adjustments may be made by HDC or a third party chosen by HDC with advance notice to the Contractor and the cost of the work shall be paid by the Contractor.

100% payment against monthly availability of machineries should be made against submitted monthly RA Bill, within 30 days, from the date of submission of clear & unambiguous bill along with log abstract regarding availability of equipment/machinery, clearly depicting availability of equipment/machinery during the calendar month, duly certified by Sr. Dy. Manager (P&E) or his authorized representative, under P&E Division of HDC-KoPT.

The contractor will be allowed to submit bill(s) only once in

1.18 **Payment  
terms: (SCC)**

1.19            **Co-  
ordination**

a calendar month.

Any claim for interest will not be entertained by HDC, KoPT with respect to any payment or balance which may be in their hands owing to any disputes between themselves and the contractor or with respect to any delay on the part of HDC, KoPT in making payment.

The contractor engaged for the instant maintenance contract should keep close co-ordination with other contractors working in the coal handling plant for various jobs like conveyor belt repair, structure replacement/ repair etc. so that all such maintenance can be carried out smoothly and simultaneously. The contractor should also keep close co-ordination with operational shift in charge, so that cargo handling operation is not hampered. In case of any dispute in this regard, decision of the section in charge would be final and binding to the contractor.

1.20    **Handing Over the plant:** The plant would be handed over to the contractor on “As is Where is” basis. A handing over note would be prepared jointly by HDC and the contractor at the time of handing over, indicating major components/ machineries.

1.21    **Taking Over the plant:** At the end of the contract the plant would be taken over by HDC from the contractor in good health and working condition. Third party Inspection Agency may be engaged by HDC for assessment of the health of the plant at the time of the taking over.

1.22    **Documentation:** The contractor will have to maintain all records/documents related to the followings-

- a) Certified documents for trouble shooting.
- b) Certified documents for schedule maintenance.
- c) Certified documents for preventive maintenance.
- d) Certified documents for condition based maintenance.
- e) Certified documents for break down maintenance.
- f) Certified chart of plant availability.

All documents, mentioned here above, will have to be submitted along with monthly bill.

**SECTION – X**  
**BIDDING FORMS**

**BIDDING FORM – I**

**MINIMUM ELIGIBILITY CRITERIA**

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

**(I) ANNUAL TURNOVER STATEMENT**

The annual turnover of .....( name of the bidding firm), **for the years 2015-16, 2016-17 and 2017-18** , based on the **Balance Sheets and Profit & Loss Accounts**, are given below:

<b>Financial years</b>	<b>Turnover (as per Auditor's Report / Balance Sheet)  [in ₹ ]</b>
<b>2015-2016</b>	
<b>2016-2017</b>	
<b>2017-2018</b>	
<b><i>Total</i></b>	
<b><i>Average Annual Turnover</i></b>	

NAME OF CHARTERED ACCOUNTANT ::

(COMPANY SEAL) ::

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

**(II) TECHNICAL EXPERIENCE**

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

**BIDDING FORM-II****TEST OF RESPONSIVENESS**

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

	Requirement	Submitted/Not submitted [Put √ if submitted & X if not submitted]	Validity/ For the month of
a)	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.	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	
b)	scanned copies of Annual Financial Turnover Statement (certified by CA) for the years 2015-16, 2016-17 and 2017-18 along with Balance Sheets and Profit & Loss Accounts.	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	
c)			
i)	<b>GST Registration Certificate.</b>	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	Not applicable.
ii)	Document in support of non-applicability.	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	Not applicable.
d)			
i)	<b>Profession Tax Clearance Certificate (PTCC)</b>	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	
	<b><u>OR</u></b> <b>Profession Tax Payment Challan</b>	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	

	Requirement	Submitted/Not submitted [Put √ if submitted & X if not submitted]	Validity/ For the month of
	(PTPC)		
ii)	Document in support of non-applicability.	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	Not applicable.
e)			
i)	Certificate for allotment of <b>EPF Code No.</b>	<input type="checkbox"/> If submitted, <b>Code No.:</b> <b>Page Number(s):</b>	Not applicable.
ii)	Latest <b>EPF Payment Challan.</b>	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	
iii)	Document in support of non-applicability.	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	Not applicable.
f)			
i)	<b>Registration Certificate of ESI Authority.</b>	<input type="checkbox"/> If submitted, <b>Code No.:</b> <b>Page Number(s):</b>	Not applicable.
ii)	Affidavit, Declaration and Indemnity Certificate.	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	Not applicable.
g)	<b>PAN Card</b>	<input type="checkbox"/> If submitted, <b>PAN No.:</b> <b>Page Number(s):</b>	Not applicable.
h)	<b>MSME / MSE / DIC / SSI / NSIC</b> certificate	<input type="checkbox"/> If submitted, <b>Page Number(s):</b>	
i)	<b>Power of Attorney</b>	<input type="checkbox"/> If submitted,	Not applicable.

	Requirement	Submitted/Not submitted [Put √ if submitted & X if not submitted]	Validity/ For the month of
		<b>Page Number(s):</b>	

**BIDDING FORM-III**

**GENERAL INFORMATION OF THE BIDDER**

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

1.	Bidder's Legal Name (IN CAPITAL LETTERS)		
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 branch office	
	c )	Telephone number(s)	
	d )	Facsimile number(s)	
	e )	Electronic mail address	
5.	Whether the bidder is a <b>Proprietorship Firm</b> or <b>Partnership Firm</b> or <b>Limited Company</b> .		
6.	<b>Details of the Banker(s) :</b>		
	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.	<b>Bank details for ECS payment :</b>		
	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.	<b>Income Tax and Goods &amp; Services Tax (GST)</b> details (if applicable):		
	a)	<b>Permanent Account Number (PAN)</b>	
	b)	<b>GST Registration Number (GSTIN)</b>	
9.	<b>Employees' Provident Fund (EPF) Code No.</b>		
10.	<b>Employees' State Insurance (ESI) Code No.</b>		
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 (Engg.)  
Haldia Dock Complex ;  
Kolkata Port Trust.**

**Name of Work:** “Maintenance contract for Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.”

Tender No. : SDM(P&E)T/46/2019-2020

E-Tender No.: KoPT/Haldia Dock Complex/P&E Div/9/19-20/ET/28

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 of MSTC Ltd. 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 (Engg.)  
Haldia Dock Complex ;  
Kolkata Port Trust.

Name of Work: : “Maintenance contract for Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.”

Tender No. : SDM(P&E)T/46/2019-2020

E-Tender No.: KoPT/Haldia Dock Complex/P&E Div/9/19-20/ET/28

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 “Comprehensive Maintenance of Coal Handling plant of Haldia Dock Complex  
(HDC) for 02 (Two) years.”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 of MSTC Ltd.* ], 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 require .....days 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 deposited .....**only** using the **Axis Bank Payment  
Gateway**, vide **URN No.:**..... of  
....., as **Earnest Money Deposit**.

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 authorised person of the bidder )

WITNESS:

Signature:

Name : \_\_\_\_\_

Name:

(In Block Letters)

Designation : \_\_\_\_\_

Address:

Date : \_\_\_\_\_

Occupation:

*(Office Seal)*

## **Integrity Pact**

Between

**Kolkata Port Trust (KoPT)** 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 “Maintenance contract for Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.

.” The Principal values full compliances 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 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.

## **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 contracts, submission or non-submission of bid 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 purpose 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/representative 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 Earnest Money Deposit/Bid Security.

- (2) If the Principal has terminated the contract according to Section 3 or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages of the contract value or the amount equivalent to 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 Undertakings/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 Port Trust.
- (e) THE BIDDER(s)/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 subcontractors. The Monitor shall be under contractual obligation to treat the information and documents of the Bidder/Contractor/Sub-contractor(s) with confidentiality.
- (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 begins with when both parties have legally signed it and will extend up to 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 of KoPT.

**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.
- (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.

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(For & on behalf of the Principal)

---

(For & on behalf of Bidder/Contractor)

(Office Seal)

(Office Seal)

Place :

Date

Witness 1:

Witness 1:

(Name & address) .....

(Name & address)

.....

.....

.....



**BIDDING FORM-VII****PRICE SCHEDULE**

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

“Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex (HDC) for 02 (Two) years.”

SI No	DESCRIPTION	QTY.	Applicable GST %		
			CGST	SGST	IGST
1.	“Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.”	Monthly LS			

NOTE:

- The Tenderer shall furnish the quoted amount online through MSTC only.
- The Tenderer shall furnish applicable GST.

DATE:

TENDERER

SEAL

**SECTION – XI**  
**CONTRACT FORMS**  
**SECTION – XI-A**  
**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/46/2019-2020**

E- Tender No. : KoPT/Haldia Dock Complex/P&E Div/

*for* : “Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.

.”

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

**This agreement** made this ..... day of ..... , Two thousand ..... ,  
**BETWEEN**

**The Board of Trustees for the Port of 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 iEn 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”]

**HEREAS**

The Trustees are desirous that certain works should be executed by the Contractor, viz. “Comprehensive Maintenance of Coal Handling plant of Haldia Dock Complex (HDC) for 02 (Two) years.”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 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 .....]
  - c) The Conditions of Contract and **Technical Specification** [all terms and conditions of Tender No. SDM(P&E)T/46/2019-2020].
  - d) Addenda [Please insert Addenda Nos. ....]
  - e) “Price Comparative Statement”, showing the prices quoted (electronically, through the website of MSTC Ltd.) 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)

(CONTRACTOR)

**SEAL**

**SEAL**

**In presence of**

**In presence of**

**SECTION- XI-B**  
**INDEMNITY BOND**

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

**Reference:**

Order No.: ...../...../...../O-... dated ..... for Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.

**Senior Deputy Manager (P&E),  
Haldia Dock Complex ;  
Operational Administrative Building (1<sup>st</sup> 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, Kolkata Port Trust**, Dist.: Purba Medinipur, West Bengal (hereinafter call “the **Engineer**”) has placed an order, bearing no. SDM(P&E) / ...../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.

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

## SECTION-XI-C

### 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,**  
**for the Port of Kolkata.**

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

Name of Issuing Bank.....

Name of Branch.....

Address.....

In consideration of the **Board of Trustees for the Port of 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 **Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex (HDC) for 02 (Two) years** 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 **₹..... (Indian Rupees .....)** only, for the faithful and satisfactory performance of the entire contract .

..... Branch, Kolkata ...../Haldia, do, on advice of the Contractor, hereby undertake to indemnify and keep indemnified the stees to the extent of the said sum of **₹..... (Indian Rupees .....)** only. We, ..... Branch, Kolkata ... ...../Haldia, her agree that if a written demand is made by the Trustees through any of its officials for ouring the Bank Guarantee constituted by these presents, we,..... Branch, Kolkata ...../Haldia, shall have no right to decline to cash the same any reason whatsoever and shall cash the same and pay the sum so demanded to the stees within a week from the date of such demand by an A/c Payee Banker's Cheque vn in favour of "Kolkata Port Trust", without any demur. Even if there be any dispute ween the Contractor and the Trustees, this would be no ground for us, ..... (Name of Bank), ..... Branch, Kolkata ...../Haldia, to decline to honour Bank Guarantee in the manner aforesaid. The very fact that we, ..... Branch, Kolkata...../Haldia, decline or fail or neglect to honour Bank Guarantee in the manner aforesaid, shall constitute sufficient reason for the Trustees

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 of .....day of..... ..200.....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 aforesaid 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 forbear 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 forbearance, 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 so 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)

**SECTION-XI-D**

**Kolkata Port Trust  
Haldia Dock Complex**

**CERTIFICATE OF COMPLETION OF WORK**

Contractor : \_\_\_\_\_

Address : \_\_\_\_\_  
\_\_\_\_\_

Date of completion : \_\_\_\_\_

Dear Sir,

**Subject :** : Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.

**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 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 **GCC Clause No. 8.67** of the General Conditions of Contract and under provisions of the contract.

(Signature of the Engineer/Engineer's Representative)

Name: .....

Designation: .....

Date: .....

(OFFICIAL SEAL)

**SECTION-XI-E**

**Kolkata Port Trust**  
**Haldia Dock Complex**  
**CERTIFICATE OF FINAL COMPLETION**

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

**Subject :** Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.

**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: .....

Date: .....

Designation: .....

**SECTION-XI-F**

**(“NO CLAIM CERTIFICATE” FROM CONTRACTOR)**

[To be submitted on Bidder’s Letter Head]

**General Manager(Engineering)**

Haldia Dock Complex ;  
Kolkata Port Trust.  
Engineering Department  
Jawahar Tower Complex ;  
P.O.: Haldia Township;  
Dist.: Purba Medinipur ;  
PIN: –721607  
West Bengal, India.

Dear Sir,

**Subject :** “Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.”

**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, Kolkata Port Trust, for the execution of the subject work, and I/we have no further claim against Haldia Dock Complex, Kolkata Port Trust in respect of the above mentioned job.

Yours faithfully,

(Signature of Contractor)

Date : .....

Name of Contractor : .....

Address : .....

(OFFICIAL SEAL OF THE CONTRACTOR)

## **SECTION – XII**

### **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 ( Part-II)**” electronically, through the website of **MSTC Ltd.** only.*

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

	iv)	<b>Bidding Form – IV</b>	_____	_____	
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Sl. No.	Particulars		Submitted/ Not submitted [Put √ if submitted and put X if not submitted]	If submitted, <u>page numbers</u>
			<input type="checkbox"/>	<input type="checkbox"/>
	v)	<b>Bidding Form – V</b>	<input type="checkbox"/>	<input type="checkbox"/>
	vi)	<b>Bidding Form – VI</b>	<input type="checkbox"/>	<input type="checkbox"/>
	vii)	<b>Bidding Form – VII</b>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>

### SECTION- XIII

## **BANK GUARANTEE FOR EARNEST MONEY**

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

**Tender No. SDM(P&E) T/46/2019-20209**

**Name of work:**

Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years.

**To,  
The Board of Trustees,  
for the Port of Kolkata.**

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

Name of issuing Bank .....

Name of Branch .....  
.....

Address .....

**WHEREAS**

The Board of Trustees for the Port of Kolkata, a body corporate – duly constituted under the Major Port Trust Act, 1963 (Act 38 of 1963), (hereinafter referred to as “The Trustees”) have invited Tender No. **SDM(P&E) T/34/2018-2019** (hereafter referred to as “The Bid”) for the work of Maintenance of Mechanized Coal Handling plant of Haldia Dock Complex, Kolkata Port Trust for 02 (Two) years. **AND WHEREAS**

Shri / Messrs ..... a Proprietary / Partnership / Limited / Registered Company, having its Registered Office at ..... (hereinafter referred to as “The Bidder”, which expression shall mean and include their successors and assigns) have submitted their offer against the Bid.

**AND WHEREAS**

One of the terms of the Bid being that the Bidder may submit Earnest Money in the form of an irrevocable and unconditional Bank Guarantee as a security against the event of the Bidder withdrawing their offer on any ground whatsoever during the period of validity of the offer and/or the Bidder fails to enter into Contract despite the Trustees select the Bidder as the successful Tenderer against the Bid,

We, ... Branch, Kolkata ...../Haldia, do hereby issue our irrevocable and unconditional Guarantee in favour of The Trustees for a sum of ..... only.

We, ... Branch, Kolkata ...../Haldia, do, on the advice of the Bidder, hereby undertake to indemnify and keep indemnified the Trustees to the extent of the said sum of ..... only.

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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 Bidder and the Trustees, this would be no ground for us, ..... (Name of Bank), ..... Branch, Kolkata ..... /Haldia, to 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 Bidder.

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 Bidder and no protest by the Bidder, 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 entire validity period of the Bid including any extension thereof until the Bidder furnishes the requisite Performance Guarantee for the amount specified in the Tender in the prescribed Form in the event of the Bidder becoming the successful Tenderer and that it shall continue to be enforceable in the Trustees' claim have been satisfied and/or discharged in full and/or till the Trustees certify that the terms and conditions of the said Bid have been fully and properly observed/fulfilled by the Bidder and accordingly, the Trustees have discharged the Bank Guarantee, subject however, that this guarantee shall remain valid upto and inclusive of ..... day of ..... ..201.....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 aforesaid 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 Bidder 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 Bid or to extend the validity period of the Bid or to postpone for any time or from time to time any of the powers exercisable by the Trustees against the Bidder and to forebear or enforce any of terms and conditions relating to the said Bid and We, ..... Branch, Kolkata ..... /Haldia, shall not be relieved from our liability by reason of any such variation or extension being granted to the Bidder or for any fore-bearance, act or commission on the part of the Trustees or any indulgence by the Trustees to the Bidder 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 so relieving us, ..... Branch, Kolkata ..... /Haldia.
5. 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)

**Note:**

- i) In case of foreign Bank Guarantee, it shall be routed through any Branch of corresponding Nationalized/Scheduled Bank in India and such corresponding Bank shall confirm the same and standby for all the commitments under the Bank Guarantee. In all cases, any dispute regarding Bank Guarantee will be adjudicated under the jurisdiction of The Calcutta High Court.
- ii) In case the Bank Guarantee is submitted from/routed through a foreign branch of a Nationalized/ Scheduled Bank of India, the Bank Guarantee submitted not on Non-judicial Stamp Paper may also be acceptable.

## **SECTION- XIV**

### **Annexure- 'A'**

#### **List of Consumables to be provided by the bidder**

<b>Sl. No.</b>	<b>Description of the Consumables</b>	<b>Qty (Tentative only)</b>	<b>Unit</b>
<b>1.</b>	Lubricants & Greases		
<b>2.</b>	Electrodes (Various Type)	12500	Nos
<b>3.</b>	Bolt, Nut, Flat Washer & Spring Washer	4200	Nos
<b>4.</b>	Flat Washer	6	Kg
<b>5.</b>	Coupling Bolt, Nut, Flat Washer & Bush	10	Sets
<b>6.</b>	OIL SEAL	70	Nos
<b>7.</b>	Packing	900	Kg
<b>8.</b>	Various types of paints	725	Liters.
<b>9.</b>	HRC Fuse 140.5 Nos.	150	Nos
<b>10.</b>	Lamps (LED)	1100	Sets
<b>11.</b>	cable jointing kit	15	Meters.
<b>12.</b>	Others various Item (Non-Predictable)	--	LS

## Annexure-B

### Man Power to be deployed per day for maintenance of Coal Handling Plant, HDC.

Sl. No.	Category	Qualification	Experience	Per shift(Heads)	General Shift	Per day(Head)
01	Engineer	Electrical Engineer: BE /B.Tech/ Equivalent in Electrical Engineering.  Mechanical Engineer: BE /B.Tech/ Equivalent in Mechanical Engineering.	5 Years working experience in bulk material handling plant. Electrical Engineer should have also experience in PLC and drives. Mechanical Engineer should have experience in hydraulics systems.	.....	01 Head (Electrical/ Mechanical)	02 Heads
02	Supervisor	Diploma or Equivalent in Electrical/ Mechanical Engg.)	7 years working experience in bulk material handling plant.	Electrical/ Mechanical(1x2=2)	02 Heads ( Electrical-1 & Mechanical-1)	04 Heads
03	Technician	ITI or Equivalent	3 Years working experience in Bulk material handling plant.	Electrician (2x2=4) Mechanic/ Welder cum fitter (2x2=4)	04 Heads (Electrician-2 Mechanic/ Welder cum fitter- 2)	12 Heads
04	Helper	Class VIII pass	----- -	6 (3x 2 =6)	06 heads	12 Heads
<b>Total</b>						<b>29 Heads</b>

### **List of Equipment Annexure- ‘C**

<b>Sl.No.</b>	<b>Equipment Name</b>	<b>Qty.</b>
01	Wagon Tippler	2 Nos.
02	Marshalling Beetle	2 Nos.
03	Charging Beetle	2 Nos.
04	Belt Conveyor	15 Nos.
05	Grizzly	2 Nos.
06	Vibro feeder	4 Nos.
07	Apron Conveyor	01 Nos.
08	Scraper conveyor	01 Nos.
09	MMD sizer/Crusher	01 Nos.
10	All transfer Tower including machineries	Lump sump
11	Conveyor Structure	5 KM (approx)
12	Stacker Cum Reclaimer	02 Nos.
13	Two Way Chute( stacker cum reclaimer)	02 Nos.
14	Two Way Chute(Wagon Tippler)	03 Nos.
15	Two Way Chute (Conveyor sytem)	02 Nos.
16	Rack and Pinion gate	01 No.
17	Ship Loader	02 Nos.
18	Mimic Panel	01 No.
19	EoT Crane	01 No.
20	Hopper Wagon tippler	04 Nos.
21	Belt Weighing Machine	04 Nos.
22	Ventilation and air-conditioning system	08 Nos.
23	Dust Suppression sytem	01 No.
24	Water Sprinkling Pump and tunnel Pit pump.	3 Nos. + 2 Nos.
25	Electrical and Electronic system, Control,	As available in plant
26	Fire fighting pumps (diesel driven)	02 nos.
27	Fire fighting pumps (electric driven)	01 no.
28	Illumination at tunnel, conveyor system, drive house, tippler house, stacker cum re-claimer, ship loaders etc.	As available in plant

## **Dock Permit Charges**

### **Annexure- 'D'**

<b>Sl. No.</b>	<b>Description</b>	<b>Rate in</b>
<b>1.</b>	Dock Permit per person	8.50 per daily permit (Maximum 12 hrs. validity). 229.50 per monthly permit 690.25 per quarterly permit 2295.00 per annual permit 3672.00 per biennial permit
<b>2.</b>	Dock Permit per vehicle and circular permit for vehicle carrying ship's gear and stores (inclusive of overnight stayed).	42.53 per daily permit 1148.31 per monthly permit 2296.62 per quarterly permit 4593.24 per annual permit
<b>3.</b>	Dock Permit for mobile crane/ Reach Stacker/ Top lifter (inclusive of overnight stayed)/ Dumper / Payloader	170.10 per daily permit 4592.70 per monthly permit 9184.40 per quarterly permit 18370.80 per annual permit
<b>4.</b>	Dock Permit for cart (inclusive of overnight stayed).	17.00 per daily permit 459.99 per monthly permit 1239.30 per quarterly permit 4461.68 per annual permit