

**KOLKATA PORT TRUST**  
**HALDIA DOCK COMPLEX**

**Tender No.: SDM (P&E) / T36 / 2018-19**  
**E-Tender No. KoPT/Haldia Dock Complex/P&E Div/37/18-19/ET/380**

**E-Tender under single cover system (Pre-qualification, Techno-commercial terms and Price under single cover) for work of 'Upgradation of operation of existing Lock Gate System of Haldia Dock Complex, Kolkata Port Trust including 5 (five) years comprehensive maintenance contract after successful completion of 1 (one) year Warranty period'**

**CORRECTIONS / ADDITIONS / DELETIONS, ETC.**

**[Total Number of Pages:7]**

NOTE:

1. This "Addendum-I" should be read in conjunction with this office above Tender Document.
2. Consequential changes, arising out of this Addendum-I, will be deemed to have been effected, even if the same were not incorporated specifically in the Tender Document.
3. One set of this "Addendum-I", shall have to be submitted along with the Offer (in with each page of it, duly signed and stamped, as token of acceptance.
4. All other terms and conditions of this office above Tender Document will remain unchanged.

# HALDIA DOCK COMPLEX

## ♠ ADDENDUM-I ♠

**Tender No.: SDM (P&E) / T36 / 2018-19**

**E-Tender No. KoPT/Haldia Dock Complex/P&E Div/37/18-19/ET/380**

### Terms and conditions

Sl no	Clause No./Ref. No.	Para/Line No./Page No.	As specified in the Tender Document.	To be Read as/ Remarks
1	SOT 3.12 i)	Page no. 6	i) Starting date & time of submission of e-Tender at <a href="http://www.mstcecommerce.com/eproc/home/kopt">http://www.mstcecommerce.com/eproc/home/kopt</a> : 10.03.2019 from 11: 00 Hrs. (IST).	i) Starting date & time of submission of e-Tender at <a href="http://www.mstcecommerce.com/eprocho/me/kopt">http://www.mstcecommerce.com/eprocho/me/kopt</a> : 19 .03.2018 from 18: 00 Hrs. (IST).
2	SOT 3.12 ii)	Page no.6	ii) <b>Closing date &amp; time of submission of e-Tender</b> at <a href="http://www.mstcecommerce.com/eproc/home/kopt">http://www.mstcecommerce.com/eproc/home/kopt</a> : <b>18.03.2019, up to 15: 00 Hrs. (IST).</b>	ii) <b>Closing date &amp; time of submission of e-Tender</b> at <a href="http://www.mstcecommerce.com/eprocho/me/kopt">http://www.mstcecommerce.com/eprocho/me/kopt</a> : <b>04.04.2019, up to 15: 00 Hrs. (IST).</b>
3	SOT 3.12 iii)	Page no.7	iii) <b>Date &amp; time of opening of Part-I (Technocommercial Bid): 18.03.2019, 15:30 Hrs. (IST) onwards.</b>	iii) <b>Date &amp; time of opening of Part-I (Technocommercial Bid): 04.04.2019, 15:30 Hrs. (IST) onwards.</b>
4	Clause No. 7.20.1 (i), (ii) and 7.20.1 1 (i)	Page-96 and 97	As specified in SCC Clause No. 7.67.1	As specified in GCC Clause No. 7.67.1
6	Clause No. 7.67.2	Page-100	As specified in SCC Clause No. 7.67.1 i)	As specified in GCC Clause No. 7.67.1 i)
7	Clause no. 7.20.1 ii)&7.20.11 ii)	Page no. 96 & 97	Performance Guarantee/ security deposit for the contract	Performance Guarantee/ security deposit for the comprehensive maintenance contract
8	Clause no. 6.6 c)	Page no. 34	Valid authorisation certificate from manufacturer/principal to be provided if the bidder is not the manufacturer or the principal of PLC, HMI, VFD & the Visualization Software/SCADA.	OEM or their authorised system integrator may submit the bid. In case of submission of bid by the system integrator, valid authorisation certificate from the OEM must be submitted along with bid and OEM will remain overall responsible for installation & commissioning of the system as a whole including comprehensive maintenance contract period. The representative of OEM must be present during the installation & commissioning period.

9	Clause no. 3.6	Page no. 6	Completion period : 5 months from LOI	The completion period will be 6 months from the date of Letter of acceptance (LOA).
10	Clause no. 3.8	Page no.6	Security Deposit : 10% of contract value in form of BG for completion period.	First security deposit will have to be submitted as 10% of project cost i.e. for supply, delivery, installation & commissioning and it will remain valid upto the defect liability period (DLP) i.e. 12 months from the date of taking over of the project.
11	Clause no. 3.9	Page no.6	Warranty Period: 12 months from the date of taking over of the project	There will be guarantee period in place of warrantee, and the same will be applicable from the date of taking over the project for a period of 12 months
12	Clause no. 3.10	Page no. 6	PBG : 10% of contract value in form of period of 72 months	This BG will start from the date of beginning of comprehensive maintenance contract (CMC) for 10 % of Annual maintenance contract (AMC) value which will have to be renewed in each year. It will cover total period of CMC i.e. 5 years.
13	Clause no. 5.13.5	Page no. 22	Rates & amounts quoted by the bidders in the "PRICE SCHEDULE", include all incidental charges [excluding GST]	Revised price schedule (Bidding form-VI
14	Clause no. 6.3 x	Page no. 33	The contractor shall maintain 100% availability of PLC based automation system for operation. Otherwise Rs. 50,000 per hour for non-functioning of system due to failure subject to maximum the amount kept as Performance Bank Guarantee shall be deducted during the comprehensive maintenance and warranty period till reinstating of the defective part of the system.	The contractor shall maintain 100% availability of PLC based automation system for operation. Otherwise Rs. 10,000 per hour for non-functioning of system due to failure subject to maximum the amount kept as Performance Bank Guarantee shall be deducted during the comprehensive maintenance and warranty period till reinstating of the defective part of the system.
15	Clause no. 7.48.1	Page no. 71 & 72	Labour licence: 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.	Labour licence: Within 3 (three) weeks 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.
16	Clause no. 7.69.2	Page no. 81	Liquidated Damage : 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]	Liquidated Damage : in case of handing over the Contract Job after the scheduled completion period, Liquidated Damage @ ½% of the Contract Price [excluding GST], for every week or part thereof, beyond the scheduled date of completion, will be deducted from the Contractor's bill. Provided always the amount of such compensation shall not exceed 10 % of the cost of supply, installation, testing & commissioning.

17	Table of contents		Table of contents	Revised Table of contents. (Annexure – x)
18	Clause no. 6.6 b)	Page no. 34	The PLC, HMI, VFD & SCADA or PC BASED VISUALIZATION & CONTROLLING SOFTWARE must be of the same make and necessary documents to be submitted in support of that.	The PLC, HMI, VFD & SCADA or PC BASED VISUALIZATION & CONTROLLING SOFTWARE must be of the same make and necessary documents to be submitted in support of that. The make of the above items will be ABB/SIEMENS/SCHNIDER ELECTRIC/FUJI.
19	Clause no. 6.9 e)	Page no. 35	PLC CPU must be comprised of 32-bit RISC processor.	PLC CPU must be comprised of 32-bit processor having PLC I/O refresh time & program scan time one (1) mili second.
20	Clause no. 6.9 g)	Page no. 35	The PLC CPU should be comprised of Built in USB interface.	To be deleted.
21	Clause no. 6.10 c)	Page no. 35	The Hardware should be comprised of up to 3 Channels Serial Ports, up to 1 Channel Wired LAN & built in memory card slot.	HMI should be compatible with the offered PLC.
22	Clause no. 6.10	Page no. 35	The HMI touch screen [Comprises of marine classification standards [ABS, LR, NK,DNV] with IP 66 front case protection, with withstanding capacity of ambient temperature of 50°C & ambient humidity of 85 % RH minimum with certified to withstand up-to contamination zone 2. Must be considered for each PLC station for local monitoring or control option.	The HMI touch screen [Comprises of marine classification standards [ABS/LR/NK/DNV] with IP 66 front case protection, with withstanding capacity of ambient temperature of 50°C & ambient humidity of 85 % RH minimum with certified to withstand up-to contamination zone 2. Must be considered for each PLC station for local monitoring or control option.
23	Clause no. 6.10 d)	Page no. 35	The Hardware should be suitable & having the provision for direct connectivity of External buzzer & CCTV camera.	The Hardware should be suitable & having the provision for direct connectivity of External buzzer through PLC. Extra monitor to be considered for CCTV monitoring.
24	Clause no. 6.11 i)	Page no. 36	The VFD should be SIL2 or SIL3 certified	To be deleted.
25	Clause no. 6.11 m)	Page no. 36	The IGBTs of the VFD and the VFD as a unit should be from the same Manufacturer.	To be deleted.
26	Clause no. 6.12h)	Page no. 37	The system be downward and upward compatible with the version of Windows.	The system should be upward compatible with the version of Windows.

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**BIDDING FORM-VI**  
**REVISED PRICE SCHEDULE**

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

**PART – A**

Sl No	Description of work	Unit	Qty.	Rate/Unit (Rs.)		Total Amou nt (in Rs.)	Amount GST%		
				In figure	In words		SGS T	CGST	IG ST
1.	Supply & Delivery of Control Instruments & Panels								
1.1	PLC Hardware with wireless communication feature for caisson & radial gate operation, control & monitoring	Set.	4						
1.2	HMI Hardware for each PLC	Set.	4						
1.3	PC based monitoring & controlling system comprising of Necessary hardware & software at central control station	Set.	1						
1.4	Electrical Control Panel / enclosure	Set.	6						
1.5	VFD Hardware for caisson & radial gate operation.	Set.	6						
2.	Supply & Delivery of Field Instruments								
2.1	Open channel Level Transmitter	Set.	3						
2.2	Insertion Type Level Transmitter	Set.	4						
2.3	Float switches	Set	2						
	Pressure transmitter	Set	2						
2.5	Motorized control valve assembly for UST tank feel in system.	Set.	4						
3.	Supply of all special cables (Ethernet cables, communication cable) required for above job	LS							
4.	All Additional special hardware for system performance	LS							
5.	CCTV Camera	No.	6						
6.	Installation & Testing, commissioning, Logic programming & monitoring for the supplied items as mentioned from Sl. No. 1 to 5 above.	LS							
Total Amount 'PART A'									

## PART – B

Sl No	Description of work	Unit	Qty.	Rate/Unit (Rs.)		Total Amount (in Rs.)	Amount GST%		
				In figure	In words		SGST	CGST	IGST
a.	Supply of 100 A distribution board (DB)	No.	4						
b.	Supply of 3.5 C X 150 Sq mm. LT X LPE Power Cable as per IS: 7098 Part II	Mtr.	1200						
c.	Supply of Fiber Optic Cable 12 Core	Mtr.	1200						
d.	Supply of 2.5 Core X 1.5 Sq. mm Screen Cable	Mtr	2000						
e.	Providing Earth Link / Earth pit as per IS and connected all the equipment with 25 X 3 mm, if required	Set.	4						
f.	Installation, Testing, Commissioning of item No. ( a ) to ( e ) including Cable Laying , Glanding and Termination & Civil foundation required for DB & Control Station at site & the site to be specified by HDC authority subject to coordination with FEI.	LS							
TOTAL AMOUNT 'PART B'									

## PART – C

PART C									
Sl No	Description of work	Unit	Qty.	Rate/Unit (Rs.)		Total Amou nt (in s.)	Amount GST%		
				In figure	In words		SGST	CGST	IGST
1	Comprehensive Maintenance Contract with full responsibility of carrying out PLC based automation for operation monitoring & adjustment of buoyancy of Inner & Outer caisson gate, operation control of Radial gates / valves for a period of 5 years, after expiry of 1 year Warranty period including manning of at least one (1) person for working shifts								
a.	Warranty period	LS							
b.	1st year CMC								
c.	2nd year CMC								
d.	3rd year CMC								
e.	4th year CMC								
f.	5th year CMC								
	TOTAL AMOUNT 'PART C'								
	NET TOTAL = TOTAL OF (PART A) + (PART B) + (PART C)								

**Clarifications & comments of HDC, KoPT.**

**Queries/Observations/Suggestions/Requests for clarification of the prospective bidders and clarifications/comments of HDC, KoPT with respect to  
Pre-bid meeting held on 07.03.2019.**

**Subject:**

**Tender No. SDM(P&E)/T/ 36 /2018-2019 [e-Tender No. KoPT/Haldia Dock Complex/P&E Div/37/18-19/ET/380] for “Upgradation of operation of existing Lock Gate System of Haldia Dock Complex, Kolkata Port Trust including 5 (five) years comprehensive maintenance contract after successful completion of 1 (one) year Warranty period.”**

Sl no	Clause No & Page No	Requirement as per the bidding documents	Queries/Observations/Suggestions/Requests for clarification	Clarifications/Comments of HDC, KoPT
01	Section – VI And page no.-32	Scope of work & technical specification	The form of the bid where the party will submit as attachment the following: a. Bill of Material with item Model No. for each item to meet the requirement. B. System Architecture diagram. c. Clause wise technical compliance in response to technical specification. d. Data Sheet has not been mentioned in the tender.	The form of tender given as bidding form-V will have to be submitted along with all technical documents in the techno-commercial part of the tender.
02	6.6 c) & 34	Valid authorisation certificate from manufacturer/principal to be provided if the bidder is not the manufacturer or the principal of PLC, HMI, VFD & the Visualization Software/SCADA.	Whether system integrators, nominated by manufacturer are also entitled to bid for the job or not.	Please refer addendum - I



03	3.5 iii) & 5	EMD : Rs.6,73,260/- (exempt agst MSME certificate)	In the event MSME certification is provided in addition to submission of EMD, whether other benefits allowable by MSME certification will be available for the job. Also please confirm if EMD is refundable within 28 days in terms of bank transfer/demand draft.	MSME certificate is applicable for exemption of EMD & Bid document fee. The certificate should be produced In line with the "Similar work" defined in the tender document to get exemption.
04	3.6 & 6	Completion period : 5 months from LOI	The completion period may be reckoned as completion of approved scope of supply, considered from date of receiving engineering inputs. It is requested that total completion period be reckoned as 7months of uninterrupted work, counted from providing engineering inputs from HDC.	Please refer addendum - I
05	3.8 & 6	Security Deposit : 10% of contract value in form of BG for completion period	Whether the BG will be considered as a 10% contract performance guarantee, to be provided after receipt of PO and to be valid for 12 months from the date of taking over of the complete system or 18 months from the date of supply whichever is earlier.	Please refer addendum -I
06	3.9 & 6	Warranty Period: 12 months from the date of taking over of the project.	It should be 18 months from the date of supply or 12 months from the date of taking over, whichever is earlier.	Please refer addendum – I
07	3.10 & 7	PBG : 10% of contract value in form of BG for period of 72 months	Whether The BG will be issued for AMC and for 10% of AMC value , on completion of contract performance BG and shall be valid for the tenure of AMC (60 months).The BG will be on a periodic renewal basis of every two years, as par Bank regulations.	Please refer addendum – I.
08	4.4.2 & 14	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.	Please clarify the following: If the POA and Digital signature holder should be same or different .If POA could be in the name of two or more persons.	The DSC holder should be the POA holder.

09	4.4.4 & 14	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	Please confirm pre-bid clarification/confirmation form a part of tender documents.	Yes, pre bid clarification/confirmation which will necessitate issuance of addendum will be part of tender documents.
10	5.13.5 & 22,23	Rates & amounts quoted by the bidders in the "PRICE SCHEDULE", include all incidental charges [excluding Goods and Services Tax (GST)],	The price schedule is suggested to have two additional columns of unit price of each set and total price, corresponding to each line item.	Please refer to addendum-I ( <b>BIDDING FORM-VI</b> ).
11	6.3 vi & 33	During warranty and comprehensive maintenance contract period, the contractor shall provide at least 01 (one) technical personnel who will be stationed at HDC to take care of the entire system so that uninterrupted operation is carried out. He will be responsible for supply of maintenance spares and consumables during the entire period and he will also assists in operation as per the direction of representative of HDC	Our scope of activity will be limited to satisfactory maintenance of the system under our scope of supply. Operational aspects will not be under the preview of AMC. The scope of spares inventory for AMC shall not include electrical/mechanical consumables of any kind.	Tender conditions prevail.
12	7.10.3 & 55	Indemnity: Maximum liability will not exceed the total supply value.	Notwithstanding any other provision to the contrary, Contractor's overall liability in terms of the subject contract will remain limited to the maximum of the total contract value during the complete tenure of the contract.	Tender conditions prevail.
13	6.3 x & 33	The contractor shall maintain 100% availability of PLC based automation system for operation. Otherwise Rs. 50,000 per hour for non-functioning of system due to failure subject to maximum the amount kept as Performance Bank Guarantee shall be deducted during the comprehensive maintenance and warranty period till reinstating of the defective part of the system.	During the warranty and AMC period, We will be liable/ responsible for ensuring 100% uptime for the system under our scope of supply. However all indirect/incidental/consequential damages of any kind shall remain excluded	Please refer to addendum-I.

14	7.46.2 & 70	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	The provision of this clause needs to be limited to the contractual clauses of the subject job and the extent of deduction should be limited to any violation/non-observance of the concerned clause.	Tender conditions prevail.
15	7.48.1 and 71 & 72	Labour licence: 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.	Considering the essence of the work as a technical upgradation, application for labour license can be done after completion of engineering activity duly certified by the project authority.	Please refer to addendum-I.
16	7.71.2 & 102	Terms of payment (Part-C) Against Manpower & spares during CAMC : 100 % payment may be made against the bill raised on quarterly basis by the contractor (within 30 days from receipt of all documents)	100% advance against PI on annual basis	Tender conditions prevail.
17	6.9 & 35	PLC should have minimum I/O handling capacity of 8000 I/Os	We would prefer to receive a tentative IO count from for preparation of techno commercial offer.	Tender conditions prevail.

18	7.69.2 & 81	Liquidated Damage : 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].	All delays as attributable to us shall attract LD clause. Any delay arising out of non availability of work front for any reasons whatsoever, not attributable to the supplier, shall be excluded from the preview of LD clause.	Please refer to addendum-I.
19	6.5.i & 34	Excavation of cable trenches if required for laying directly buried cables in underground Civil structure for distribution boards.	Need approx length of excavation and who will provide the required mechanical excavator?	Everything is in the scope of successful bidder. For length of excavation, bidders may visit site & quote accordingly.
20	6.9 & 35	Multi CPU feature for n:1 redundancy should be available within the CPU for future provisions without the need to change the existing CPU.	Is the clause asking for redundant CPU, with two different CPU rack and both CPU will work as hot-standby mode? Also I/O signal redundancy is required? As per application redundant PLC is not required at all. Stand alone PLC with Rack base system is sufficient.	Tender conditions prevail
21	6.9.A & 35	Both of PLC hardware & software should conform to IEC 61131 international standard.	As per IEC 61131, for logic writing software all language (like Ladder, FBD, IL, ST, SFC) are required or only ladder and FBD are sufficient?	Ladder and FBD are sufficient. However, confirmation of IEC61131 is mandatory.
22	6.12.e & 36	The system should have option for a varied range of part library with simulator and emulator function.	Is the engineering software required soft simulator or emulator? It is required.	Tender conditions prevail
23	6.9.D & 35	PLC I/O refresh time & Program scan time should be less than or equal to one (1) milli second.	It should less than 50 milli second.	Tender conditions prevail

24	6.16.6 And 39 & 40	For Continuous monitoring of radial valve operation & operating panels, one camera of dome type with 10X optical zoom with night vision per radial valve. Therefore, total 6 nos. CCTV camera will be installed near valves to monitor its operation	CCTV camera will be Ethernet IP based or PTZ camera? Is it indoor or outdoor type? What IP protection is required for outdoor installation?	CCTV camera will be PTZ type. 4 nos will be indoor type with protection IP 55. 2 nos will be outdoor type with protection IP 66.
25	6.12.c & 36	There must not have any licensing limitation on TAGs for future TAG expansion.	Few SCADA vendor have unlimited TAG facility but limited page facility.. Hence SCADA license must be Unlimited tag and Unlimited page facility.	Tender conditions prevail. Unlimited tags required for future provision
			Is this "PC BASED VISUALIZATION" software means apart from SCADA it includes CCTV also? CCTV fotware is the part of SCADA	2 displays are required. 1 for Lock gate operation, 1 for CCTV
26	6.11.g & 36	VFD IGBT & Vfd same make	1. IGBT is just one internal component of VFD. Through this clause specification is limiting towards a single spefific vendor for this tender. Hence please change or strike out the term IGBT from clause.	Please refer to addendum-I.
27	6.11.e & 36	The VFD should have comprising of minimum 7 DI, 4 DO, 2 Relay Output, 2 Analog input, 2 Analog output with feature to accept pulse train as input	As per application it is not required. Required Di - 6no,Do-3,Ai-2,Ao-1	Tender conditions prevail.
28	6.3.x & 33	The contractor shall maintain 100% availability of PLC based automation system for operation. Otherwise Rs. 50,000 per hour for non-functioning of system due to failure subject to maximum the amount kept as Performance Bank Guarantee shall be deducted during the comprehensive maintenance and warranty period till reinstating of the defective part of the system.	Our request please consider Rs.5000.00 per day.	Please refer to addendum-I.
29	6.3 Vii & 33	During warranty and comprehensive maintenance contract period, the contractor shall provide at least 01 (one) technical personnel who will be stationed at HDC to take care of the entire system	1. Is this technical person presence required at site round the clock (i.e. 24 x 7 ) or person requirement is for General sift (9 AM to 5 PM) only?	Tender conditions prevail. General shift and as and when required

30	7.71.2 & 102	<p>a) Against Supply &amp; Delivery :</p> <p>i) Payment for 70% amount of each item will be made against supply of respective item at site and submission of bills along with Custodian Certificate and other relevant documents like Inspection Reports, Challans, etc.</p> <p>ii) Payment for 20% amount of each item will be made against installation of the respective item and submission of bills along with Installation Certificate.</p> <p>iii) Payment for 10 % amount will be made against Testing, successful commissioning, taking over the commissioned job by KoPT and submission of bills, along with Job Completion Certificate.</p> <p>b) Against Installation and Commissioning:</p> <p>i) Payment for 90% amount of each item will be made against installation of the respective item and submission of bills along with Installation Certificate.</p> <p>ii) Payment for 10 % amount will be made against Testing, successful commissioning, taking over the commissioned job by KoPT and submission of bills, along with Job Completion Certificate.</p> <p>c) Against Manpower &amp; spares during CAMC 100 % payment may be made against the bill raised on quarterly basis by the contractor towards deployment of manpower including the spares &amp; maintenance during the period for comprehensive maintenance contract including the warranty period.</p> <p>Payment will be made to the contractor's bank account through RTGS/NEFT within 30 days of receipt of satisfactory acceptance note of supply/ installation/commissioning and on submission of clear bill accompanied with necessary documents e.g. receipted challan in duplicate, test certificate, guarantee certificate and inspection report etc.</p>	<p>Payment terms preferred – Supply - 10% advance with P.O. against ABG, 80% against material supply on prorata basis, 10% within 30 days of commissioning against supply of PBG which will be valid till warranty period. Installation – 10% advance, balance 90% prorata basis against monthly bill.</p>	<p>Tender conditions prevail.</p>
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31	General query	No specific clause referred	What is the I/O count of each PLC set?	It depends on bidder's basic design which have to meet HDC's site requirement.
32	General query	No specific clause referred	1. What are the each type(i.e. DI/DO/AI/AO/RTD) I/O count in each PLC set? 2. Is there any Special type I/O signal is required like High speed counter or PWM etc?	It depends on own (bidder's) basic design which have to meet HDC's site requirement.
33	General query	No specific clause referred	What is the operating ambient temperature of PLC? Is it 60 deg C ?	min 55 deg C
34	General query	No specific clause referred	1. PLC is required marine approval certificate? 2. Is it required conformal coating also?	Marine approval certificate is required. Conformal coating is also required.
35	General query	No specific clause referred	1. Drive will be operated through hardwired electrical signal from PLC or it will operate through PLC over communication? 2. If communication between drive and PLC required, then 100 mbps high speed ethernet based communication required or it may be slow speed serial communication like Modbus or Profibus is acceptable?	There is no provision of internet or intra net at site. However, your system should be such that it would be able to communicate with high speed.
36	6.11 d) & 36	The maximum output frequency should be 500Hz.	The maximum output frequency should be 50Hz-60 Hz.	Tender conditions prevail.