

12/01/2024  
Lavesh Vaity

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यांत्रिकी एवं विद्युत अभियांत्रिकी विभाग,  
निर्माण भवन, पाचवा माला,  
नरसु नाखवा मार्ग, माझगांव,  
मुंबई - ४०० ०१०. इंडिया.

MECHANICAL & ELECTRICAL  
ENGINEERING DEPARTMENT  
NIRMAN BHAVAN, 5 TH FLOOR,  
NARASU NAKHAWA MARG,  
MAZGAON, MUMBAI – 400 010. INDIA.

No. MEED/O/1-ABP(19/2023)/228

Date : 12 JAN 2024

**LETTER OF ACCEPTANCE**

To,  
JOINT VENTURE OF –  
M/S. ETA ENGINEERING PVT. LTD. AND  
M/S. PRUDENT EPC PVT. LTD.,  
403, DE ELAM SHRAN MANSION,  
SONAWALA CROSS ROAD NO.2  
GOREGAON (E) MUMBAI-400063

Dear Sirs,

Sub : TENDER NO. MEED. 19/2023-  
AUGMENTATION OF FIREFIGHTING FACILITIES AT PIRPAU  
TERMINAL- MECHANICAL AND ELECTRICALWORKS RELATED  
TO NEW FIRE WATER PUMP HOUSE.

Ref: Your offer dated 17.11.2023.

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Your offer dated 17.11.2023 amounting to Rs.20,37,11,519/- including GST, arithmetically corrected to Rs.20,36,91,212/- (Rupees Twenty Crores Thirty Six Lakh Ninety One Thousand Two Hundred And Twelve only) including GST for the subject tender stands Lowest and has been accepted by the Board of Mumbai Port Authority. The completion period for the subject work shall be 365 calendar days from the date of issue of this Letter of Acceptance(LOA).

2. You are hereby requested to furnish Performance Guarantee (Security Deposit) of Rs.2,03,69,121/- (Rupees Two Crore Three Lakh Sixty-Nine Thousand One Hundred Twenty-One only) within 28 days from the date of issue of this LOA payable in the form of Demand Draft/ Pay Order/Bank Guarantee from a Nationalized/Scheduled. The BG shall be executed on Stamp paper of appropriate value as applicable after approval of draft BG. (Tender clause No. 34 of ITT).
3. You will have to enter into a formal Contract Agreement with the employer for the subject contract work in accordance with clause No. 32 & 33 of Instructions to Tenderers.
4. The "Engineer" to the Contract is M/s. Tractebel Engineering Pvt. Ltd.
5. All other terms and conditions shall be as per the Tender document, replies to pre-bid, addenda, corrigenda for the subject tender
6. The detailed Letter of Acceptance with Schedule of Rates shall follow.
7. Kindly acknowledge the receipt of this Letter of Acceptance (LOA).

D.A: nil



Yours faithfully,

(MANAS MANDAL)  
CHIEF MECHANICAL ENGINEER

फोन /Phone: 91-22-6656 5656  
ईमेल Email: cme@mumbaiport.gov.in  
वेबसाईट/Website: www.mumbaiport.gov.in



यांत्रिकी एवं विद्युत अभियांत्रिकी विभाग,  
निर्माण भवन, पाचवां माला,  
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मुंबई - ४०० ०१०. इंडिया.

MECHANICAL & ELECTRICAL  
ENGINEERING DEPARTMENT  
NIRMAN BHAVAN, 5 TH FLOOR,  
NARASU NAKHAWA MARG,  
MAZGAON, MUMBAI – 400 010. INDIA.

No. MEED/O/1-ABP(19/2023)/ 326

Date : 29 JAN 2024

To,

### **DETAILED LETTER OF ACCEPTANCE**

JOINT VENTURE OF –  
M/S. ETA ENGINEERING PVT. LTD. AND  
M/S. PRUDENT EPC PVT. LTD.,

Dear Sirs,

Sub : TENDER NO. MEED. 19/2023-  
AUGMENTATION OF FIREFIGHTING FACILITIES AT PIRPAU  
TERMINAL- MECHANICAL AND ELECTRICAL WORKS RELATED  
TO NEW FIRE WATER PUMP HOUSE.

Ref: i) Your offer dated 17.11.2023.  
ii) This office letter no. MEED/O/1-ABP(19/2023)/228  
dated 12-01-2024

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With reference to your offer dated 17.11.2023 for the subject tender and in continuation to our Letter of Acceptance No. MEED/O/1-ABP(19/2023)/228 dated 12-01-2024 and its acceptance thereof, we are pleased to issue this Detailed Letter of Acceptance for the subject work on the following terms and conditions:

#### **1.0 SCOPE OF WORK:**

Scope of work under this Contract shall be as detailed in the Tender Document and its amendments.

#### **2.0 CONTRACT VALUE:**

The accepted contract value for the subject work is Rs. 20,36,91,212.00 including GST (arithmetically corrected). A copy of accepted Schedule of Quantities & Rates is enclosed.

#### **3.0 COMPLETION PERIOD:**

365 calendar days from the date of issue of Letter of Acceptance.

#### **4.0 PERFORMANCE GUARANTEE:**

To pay **Security Deposit** of Rs. 2,03,69,121/- (Rupees Two Crore Three Lakh Sixty-Nine Thousand One Hundred Twenty-one) only, (within 28 days from the date of issue of LOA) payable in the form of Demand Draft/ Pay Order/Bank Guarantee from a Nationalized/Scheduled. **The BG shall be executed on Stamp paper of appropriate value as applicable after approval of draft BG.** (Tender clause No. 34 of ITT).



## **5.0 AGREEMENT:**

Since the contract value for is more than Rs. 10 Lakhs, you will have to enter into a formal **Agreement** with the employer for the subject contract work in accordance with clause No. 32 & 33 of Instructions to Tenderers.

## **6.0 TERMS OF PAYMENT:**

Payment will be made in accordance with Clause No. 23 of GCC & SCC.

The terms of payment to be made to the contractor against SOR Items under this contract shall be as below:

- 70% on receipt and acceptance of material at site.
- 30% on completion of Erection / Installation, Testing and Commissioning

## **7.0 TAXES & DUTIES:**

Any statutory deductions such as Income Tax, Service Tax or any other levy of taxes and duties imposed by any Government authorities from time to time shall become applicable. Payment of all Port dues and any other amounts / charges those are due shall be recovered from the contractor's bill.

## **8.0 INSURANCE POLICY:**

As per Clause no. 9.1 of GCC & SCC, the contractor shall take Insurance Policy for full value of the works under the contract. The amount of premium shall deemed to be included in accepted contract value. As per Clause no. 9.2 of GCC & SCC, Rs. 10 Lakhs per occurrence, with the provision of two occasion initially and subsequently contractor should take out fresh policy in case two occasions are exhausted. Contractor should ensure that two occasions are always available during the currency of contract. The amount of premium shall deemed to be included in accepted contract value.

## **9.0 GUARANTEE PERIOD /DEFECT LIABILITY PERIOD:**

The Guarantee period / Defect Liability period shall be 24 months from the date of commissioning and acceptance of complete system by MbPA. The successful tenderer shall attend the fault/defect within 72 hours from its notification by MbPA through email/letter. In event of failure to attend the fault/breakdown, within 72 hours, penalty of Rs. 5,000/- per day for first day and Rs. 10,000/- for further days will be deducted / charged.

## **10.0 STORAGE:**

Suitable Open Space of approx. area of 300 sq.m. will be free of cost for storage, temporary accommodation, office, fabrication, etc. as per site availability and technical feasibility at Pir Pau. Any extra area required will be allotted, if feasible on chargeable basis as per MbPA SOR.

## **11.0 You are requested to comply with the following formalities:**

- a) To take out insurance policy as per conditions of contract before commencement of work.
- b) To take out Labour Licence before commencement of work in case you are engaging twenty or more workmen for execution of the subject work.
- c) To comply with the Employees State Insurance Act, 1948 GOI. Ministry of Labour & Employment, Notification dated 20th July, 2009 and provide the ESI code No. and updating the contribution towards the ESIC.
- d) To comply with all labour Laws in force.
- e) To comply with GST Regulations with GSTN documents.
- f) To comply with the Employees Provident Funds (EPF) and ensure that the monthly wages of your workers are credited through ECS.
- g) After lodging the Security Deposit and complying with all other pre-requisite you shall commence the work in consultation with the Engineer In-charge. The Engineer to the Contract is M/s. Tractebel Engineering Pvt. Ltd.



12.0 Your bill alongwith all relevant documents as per the enclosed checklist shall be submitted through EBS Portal so as to enable this office to make the payment early. You are requested to indicate the amount of GST bifurcated (SGST & CGST separately & HSN/SAC Code of each item) in the Invoice/Bill while submitting and to take note that Taxes will be applicable as per prevailing Govt. notification.

13.0 Kindly acknowledge the receipt of this letter on the acknowledgement slip enclosed.

- D.A: i) Acknowledgement Slip (to be returned)  
ii) Copy of Schedule of Quantities & Rates  
iii) Checklist

Yours faithfully,



(MANAS MANDAL)  
CHIEF MECHANICAL ENGINEER



Acknowledgement

I/ We acknowledge with thanks receipt of your letter No. \_\_\_\_\_ dated \_\_\_\_\_

in connection with Tender No. \_\_\_\_\_

नियिद्धा कांक्ष्या \_\_\_\_\_ के कांषंध में  
मैं / हम आपके दिनांक \_\_\_\_\_ के पत्र कांक्ष्या  
की प्राप्ति काधन्यावाह  
कर्तीकाक करता हूँ / करते हैं.

Date of receipt : \_\_\_\_\_

प्राप्ति की तारीख : \_\_\_\_\_

Signature : \_\_\_\_\_

हक्ताक्षर : \_\_\_\_\_

Firm's Name : \_\_\_\_\_

फर्म का नाम : \_\_\_\_\_

Address : \_\_\_\_\_

पता : \_\_\_\_\_



**CHECK – LIST**

**(To be submitted by contractor)**

Contractor is requested to submit the bill/s to Office Superintendent, MEED's Accounts Section, 6<sup>th</sup> floor, Nirman Bhavan, Mazgaon, Mumbai – 400 010 for settlement/ payment of bill up on completion of the work along with the following information.

No.	Head	Details
1	Subject :	
2	Name of the Contractor	
3	Work Order Amount	
4	Work Order No.	
5	Expected date of commencement of work	
6	Actual date of commencement of work	
7	Expected date of completion of work	
8	Actual date of completion of work	
9	Period of work/services provided (in case of periodical work/ Maintenance contract.)	
10	Bill No. & Date	
11	Billed Amount	
12#	Copy of Measurement Book certified by Executing Officer	
13	ECS Mandate Form (Provide mobile No. & email ID of firm and person to be contacted if required)	
14	Photo copy of PAN card.	
15	Cancelled cheque/ photo copy of cheque.	
16#	Work Done / Completion Certificate certified by MbPT officer (if applicable).	
17#	Certified Xerox copy of: Employees Muster, Pay-roll - Wage Register and also pay-slips of employees deputed on the subject work.	
18	Documents proving payment of wages to employees made through ECS.	
19	ESIC proof (copies to be attached)/ or undertaking to that effect.	
20	EPF proof, (copies to be attached)/ or undertaking to that effect.	
21	GSTN registration details/ if not registered submit undertaking to that effect.	
22	Details of Security Deposit	
# 23	Copy of sanction of the competent authority for Delay/extension of completion period if any and Condonation for delay due to MbPT	

# To be provided/ certified by the AEE/EE of the concerned section.

Please note that the Bill will not be accepted / could not be processed for payment if required documents are not submitted along with check-list.



MUMBAI PORT AUTHORITY

TENDER No. MEED.19/2023 - Augmentation of Firefighting Facilities At Pirpau Terminal - Mechanical And Electrical Works Related To New Fire Water Pump House

SCHEDULE OF QUANTITIES AND RATES

NAME OF BIDDER: M/s. ETA ENGINEERING PRIVATE LIMITED						
Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)
A	MECHANICAL					
A.1	New Pumps Inside Fire Water Pump House					
i	New Vertical turbine Main Fire water pump along with Diesel Engine-1440 M3/hr @ 145 MWC Head (As per OISD-156 requirement) SUCTION HEAD APPROX 9 METERS	Nos.	2	48,000,000	8,640,000	56,640,000
ii	New Vertical turbine Jockey pump with electric motor -216 M3/hr @ 150 MWC Head-New (As per OISD-156 requirement) SUCTION HEAD APPROX 9 METERS	Nos.	2	12,470,000	2,244,600	14,714,600
A.1.2	Existing Pumps and equipment Inside Fire Water Pump House DISTAMNTLING FROM EXISTING PUMP HOUSE AND , SHIFTING, INSTALLATION TESTING AND COMMISSIONING AT NEW PUMP HOUSE AT APPROX DISTANCE OF 300 METERS	Nos.	2	628,000	113,040	741,040
i	Existing Vertical turbine Main Fire water pump (Diesel engine)-1440 M3/hr @ 145 MWC Head (As per OISD-156 requirement)	No.	1	628,000	113,040	741,040
ii	Existing Vertical turbine Main Fire water pump (Motor Drive)-1440 M3/hr, (Motor rating 890kW) @ 145 MWC Head-Existing (As per OISD-156 requirement)	No.	1	78,500	14,130	92,630
iii	Existing Hydro-pneumatic Tank-3000L	No.	1	78,500	14,130	92,630
iv	Existing Air Compressor-5HP	No.	1			
A.2	New Piping & Valves	Mtr	138	35,490	6,388	41,878
i	600NB Pipe (CS as per IS:3589/IS:1239) 10mm thick, with cement line/ poly glass lined	Mtr	6	13,520	2,434	15,954
ii	300NB Pipe (CS as per IS:3589/IS:1239) 8mm thick, with cement line/ poly glass lined	Mtr	18	5,460	983	6,443
iv	150NB Pipe (CS as per IS:3589/IS:1239) with cement line/ poly glass lined	Mtr	18	2,080	374	2,454
v	50NB Pipe (CS as per IS:3589/IS:1239) with cement line/ poly glass lined					
	<b>Motorized Gate Valve-600NB.</b> Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2: 1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seals and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	Nos.	5	580,900	104,562	685,462

12



3,427,310

Sr. No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
vi	<b>Motorized Gate Valve-150NB,</b> Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2:1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seals and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	Nos.	2	130,310	23,456	153,766	307,532
vii	<b>Gate Valve-600NB,</b> Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2:1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seals and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	No.	1	423,900	76,302	500,202	500,202
viii	<b>Gate Valve-300NB,</b> Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2:1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seals and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	No.	1	161,710	29,108	190,818	190,818
x	<b>Gate Valve-50NB,</b> Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2:1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seals and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	Nos.	5	46,315	8,337	54,652	273,259
xi	<b>Gate Valve-100NB,</b> Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2:1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seals and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	Nos.	4	20,410	3,674	24,084	96,335



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
xii	Gate Valve-15NB, Isolation valves shall be flanged gate valves with stem, outside screw, yoke and indicator, manufactured to BS 5150 / DIN 3230 part 4 / DIN 3352, face-to-face dimension to BS 5163 type A (ISO 5752 S.3), flanges and drilling to ISO 7005-2 (BS EN 1092-2:1997, DIN 2501). Gate valves shall be fitted with a seating trim manufactured from zinc-free bronze. Seats and wedge covering shall be manufactured from EPDM rubber. Valves shall incorporate seat plugs for the removal of debris. The valve assembly shall be conforming to BS EN 1074-2 and OISD-156 & technical specification requirement.	Nos.	2	4,790		5,652	11,304
xiii	Non-Return Valve-600NB, IS : 5312 Swing check type reflux (non-return) valves Part I (Part I) single door pattern and as per OISD-156 & technical specification requirement.	Nos.	5	395,640	71,215	466,855	2,334,276
xiv	Non-Return Valve-150NB, IS : 5312 Swing check type reflux (non-return) valves Part I (Part I) single door pattern and as per OISD-156 & technical specification requirement.	Nos.	6	131,095	23,597	154,692	928,153
xv	Non-Return Valve-25NB, IS : 5312 Swing check type reflux (non-return) valves Part I (Part I) single door pattern and as per OISD-156 & technical specification requirement.	No.	1	3,925	707	4,632	4,632
xvi	Niddle Valve-25NB as per OISD-156 & technical specification requirement.	No.	1	3,454	622	4,076	4,076
xvii	Niddle Valve-15NB as per OISD-156 & technical specification requirement.	Nos.	17	2,198	396	2,594	44,092
xviii	Pressure Relief Valve	Nos.	2	5,652	1,017	6,669	13,336
xix	EOI Crane- 7.5 Ton Capacity 15 KL steel tank for HSD storage with level transmitter, Flowmeter and switch at FCB with 2nos. pumps of 3KL per Hour capacity and 65NB piping length of 300 meters (approx.) to TCB pump house with 11 nos. Isolation ball valves etc., including associated electrical works.	LS	1	973,400	175,212	1,148,612	1,148,612
B ELECTRICAL							
1 HT Panel	3.3 KV HT VCB Panel with 1 I/C, 4 Outgoing feeder (630A) Including spare Feeder 630 A VCB with necessary CT, VT, metering & protections	No.	1	3,600,000	648,000	4,248,000	4,248,000
1.1	LV Switchgear 415V, 3phase, 4 wire, 50 Hz, 1600A, 50 KA for 1second, double front fully draw out type PMCC comprising of ACBs, CTs/PTs, relays, indicating lamps etc. as per attached SLDs, specifications & DS including weather proof double compression NI plated brass cable glands and lugs for all incoming and outgoing feeders and including supply of commissioning and 2 years O&M spares.	No.	1	1,100,000	198,000	1,298,000	1,298,000
1.2	CAPACITOR PANEL: 3.3 KV, 3Ph-N, 50Hz, 25KA for 1second, 500KVAR capacitor panel with capacitors and APFC relay, protections, filters etc. including weather proof double compression NI plated brass cable glands and lugs for all incoming and outgoing feeders and including supply of commissioning and 2 years O&M spares.	No.	1	1,400,000	255,000	1,652,000	1,652,000



S.No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
1.4	CAPACITOR PANEL 415 V, 3Ph-N, 50Hz, 50 KA for 1second, 100KVAR capacitor panel with capacitors and APFC relay, protections, filters etc. including weatherproof double compression Ni plated brass cable glands and lugs for all incoming and outgoing feeders and including supply of commissioning and 2 years O&M spares.	No.	1	350,000	63,000	413,000	413,000
2	<b>LDB and SUB-LDB</b>						
2.1	LDB / LP, Weatherproof, IP 65, incomer 63A, 3 Phase, 4 wire, 12 Way LDB, 10KA for 1 sec with RCBO	No.	1	51,150	9,207	60,357	60,357
2.2	UPSDB for critical lighting	No.	1	110,825	19,949	130,774	130,774
3	<b>Transformer</b>						
3.1	750 kVA, 3.3 KV/0.433 KV, Dyn11, AN type with on load tap changer power transformer complete with weather proof double compression Ni plated brass cable glands and cable lugs for all incoming and outgoing cables and all other accessories and as per attached specifications & DS including supply of commissioning and 2 years O&M spares.	No.	1	4,100,000	738,000	4,838,000	4,838,000
4	<b>BATTERY &amp; DC DB</b>						
4.1	110V BATTERY CHARGER consisting of dual float cum boost charger and Ni-Cd type battery with two hour back up capacity for above HT and LT breaker including supply of commissioning and 2 years O&M spares.	No.	1	230,175	41,432	271,607	271,607
4.2	DC DISTRIBUTION BOARD: 110V/DC, 2 wire 63A DC Distribution Board fed by dual float cum boost charger including supply of commissioning and 2 years O&M spares.	No.	1	31,540	5,677	//	37,217
4.3	Incomer: 63A DP MCB						
4.4	Outgoing: 15nos. 16A DP MCB						
5	<b>LIGHTING FIXTURES &amp; ACCESSORIES</b>						
5.1	230 Volt AC, 80W well glass units, LED lighting fixtures and all other accessories for fire water pump house	Nos.	25	4,216	759	4,975	124,372
5.2	230 Volt AC, 80W well glass units, LED lighting fixtures and all other accessories for fire water pump house with 1hr battery backup.	Nos.	5	9,889	1,780	11,669	58,345
5.3	230 Volt AC, 40W LED lighting fixtures indoor use and all other accessories for electrical room	Nos.	30	3,410	614	4,024	120,714
5.4	230 Volt AC, 40W LED lighting fixtures indoor use and all other accessories for electrical room with 1hr battery backup.	Nos.	5	4,900	882	5,782	28,910
5.5	230 Volt AC, 40W LED lighting fixtures flameproof and all other accessories for battery room	Nos.	2	8,600	1,548	10,148	20,296
5.6	230 Volt AC, 40W LED lighting fixtures flameproof and all other accessories for electrical room	Nos.	5	2,728	491	3,219	16,095
5.7	230 Volt AC, 1x18 W LED lighting fixtures indoor use and all other accessories for electrical room	Nos.	5	5,735	1,032	6,767	33,837
5.8	Exit Light	m	600	67	12	79	47,426
5.9	Lighting Wire	Nos.	10	1,860	334	2,194	21,941
5.10	6A indoor Switch board	Nos.	2	2,865	516	3,381	6,761
5.11	6A FLP Switch						
6	<b>JUNCTION BOX</b>						
	240 Volt AC, 16 A, Cast Aluminium weatherproof 4-way, 125 mm (minimum) internal dimensions junction box with terminals block suitable for 2.5 sq.mm along with weatherproof double compression Ni plated brass cables glands for all incoming and outgoing cables, PVC shroud and other accessories.	Nos.	100	4,960	893	5,853	585,280



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
7	<b>RECEPTACLES</b>						
	Weatherproof Interlocking type switch sockets and plugs of following ratings as per attached specifications. All switch sockets shall be provided with 3mm thick FRP canopy with side cover and required no. of double compression stainless steel cable glands and stopping plug.						
	i) 415V, 5-pin, 63A Welding Receptacle weatherproof switch socket and plug	No.	1	7,905	1,423	9,328	9,328
	ii) 240V, 3-pin, 16A/5A weatherproof switch socket and plug	Nos.	15	5,115	921	6,036	90,536
8	<b>RIGID FLEXIBLE CONDUIT</b>						
8.1	25 mm Dia. Heavy duty Rigid PVC Conduit of minimum 2.0 mm thick of wall with all accessories like bends, elbow etc and as per IS 2509. "	m	625	116	21	137	85,550
8.2	100 mm dia GI conduit - Class-B Galvanized Iron (G.I. pipes) conforming to IS-1239 complete with accessories (bends, reducers, couplers etc.) of following sizes:- 100 mm NB	m	150	2,555	460	3,015	452,235
9	<b>HT/LT CABLES AS PER ENCLOSED SPECIFICATIONS</b>						
	3.3KV(U/E) armoured XLPE, FRLS Power Cable of following size:-	m	265	1,860	335	2,195	581,622
9.1	3C x 150 sqmm (AL)	m	350	1,812	326	2,138	
	1.1KV(E) armoured XLPE, FRLS Power Cable of following size:-						
9.2	3.5C x 240, Sqmm XLPE AL	m	300	384	69	453	135,936
9.3	4C X 25, Sqmm XLPE AL	m	210	260	47	307	64,428
9.4	4C X 10, Sqmm XLPE AL	m	540	174	31	205	110,873
9.5	4C X 2.5, Sqmm XLPE AL	m	50	150	27	177	8,850
9.6	3C X 2.5, Sqmm XLPE AL	m	50	132	24	156	7,788
9.7	2C X 2.5, Sqmm XLPE AL	m	265	95	17	112	29,707
9.8	2C X 4, Sqmm XLPE AL	m	300	290	52	342	102,660
9.9	2C X 16, Sqmm XLPE AL	m					



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
1.1.KV(E) armoured XLPE, FRLS Control Cable of following sizes:-							
9.10 7Cx 2.5 SQMM CU	m	1000	450	81	531	531,000	
9.11 3Cx 2.5 SQMM CU	m	100	240	43	283	28,320	
- 10 END TERMINATION KIT							
Heat shrinkable end termination kit suitable for 3.3kV (UE) XLPE, FRLS cables of following sizes.							
10.1 3Cx 150 sqmm (Al.) ( suitable for indoor purpose)	Nos.	8	17,282	3,111	20,393	163,142	
11 CABLE LUGS							
Crimping type heavy duty, long barrel Tinned Cu /Al lugs for all Al and Cu cables as the case may be for the following size for indoor use:-							
11.1 3.5Cx 240, Sqmm XLPE AL	Nos.	50	620	112	732	36,580	
11.2 4Cx 25, Sqmm XLPE AL	Nos.	40	356	64	420	16,803	
11.3 4Cx 10, Sqmm XLPE AL	Nos.	20	310	56	366	7,316	
11.4 4Cx 2.5, Sqmm XLPE AL	Nos.	40	265	48	313	12,508	
11.5 3Cx 2.5, Sqmm XLPE AL	Nos.	24	265	48	313	7,505	
11.6 2Cx 2.5, Sqmm XLPE AL	Nos.	20	265	48	313	6,254	
11.7 2Cx 4, Sqmm XLPE AL	Nos.	20	295	53	348	6,962	
11.8 2Cx 16, Sqmm XLPE AL	Nos.	20	310	56	366	7,316	
11.9 7Cx 2.5 SQMM CU	Nos.	50	265	48	313	15,635	
11.10 3Cx 2.5 SQMM CU	Nos.	30	265	48	313	9,381	
12 CABLE GLANDS							
Double compression stainless steel cable gland suitable for following XLPE, FRLS cable sizes & as per relevant IS for indoor use.							
12.1 3.5Cx 240, Sqmm XLPE AL	Nos.	12	1,333	240	1,573	18,875	
12.2 4Cx 25, Sqmm XLPE AL	Nos.	10	589	106	695	6,950	
12.3 4Cx 10, Sqmm XLPE AL	Nos.	6	496	89	585	3,512	
12.4 4Cx 2.5, Sqmm XLPE AL	Nos.	10	403	73	476	4,755	
12.5 3Cx 2.5, Sqmm XLPE AL	Nos.	8	403	73	476	3,804	
12.6 2Cx 2.5, Sqmm XLPE AL	Nos.	10	385	69	454	4,543	
12.7 2Cx 4, Sqmm XLPE AL	Nos.	10	434	78	512	5,121	
12.8 2Cx 16, Sqmm XLPE AL	Nos.	6	385	69	454	4,543	
12.9 7Cx 2.5 SQMM CU	Nos.	10	294	53	347	2,082	
12.10 3Cx 2.5 SQMM CU	Nos.	10	264	48	312	3,115	



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
13	Cable Trays						
13.1	Ladder type FRP cable tray (100mmx2mm, 3 Meter length) with minimum hot dip zinc coating 75 micron with accessories like coupler plates,bends, Stainless steels hardware's like nuts & bolts , bends, washers etc and as per IS & ES:8161 along with the 90 deg Horizontal Bend Ladder type, TEE Connection Ladder type, 90 deg Vertical Bend (inside) Ladder, 90 deg Vertical Bend (outside).	m	600	1,730	311	2,041	1,224,840
13.2	50mm Wide	m	50	1,300	234	1,534	76,700
13.3	Perforated type FRP cable tray (100mmx2mm, 3 Meter length) with minimum hot dip zinc coating 75 micron with accessories like coupler plates,bends, Stainless steels hardware's like nuts & bolts , bends, washers etc and as per IS & ES:8161 along with the 90 deg Horizontal Bend Perforated type, TEE Connection Perforated type, 90 deg Vertical Bend (inside) Perforated, 90 deg Vertical Bend (outside).	m	600	1,300	234	1,534	920,400
13.4	50mm Wide	m	50	756	136	892	44,604
14	STEEL STRUCTURAL/ MS PLATE/ MS CHEQUARD PLATE						
14.1	ISa 50X50X6	Ton	2	186,000	33,480	219,480	438,960
14.2	3mm to 10mm thick MS plate conforming to IS:2062	Ton	1	217,000	39,060	256,060	204,848
14.3	Anchor/Fastener	Nos	1600	186	33	219	351,168
14.4	Laying of cables in directly buried including supply of sand & bricks including sand filling & brick works after cable laying for directly buried & in trenches etc as per cabling layouts	m	300	1,800	324	2,124	637,200
15	EARTHING & LIGHTNING						
15.1	Hot dip Galvanized earthing and lightning protection materials along with the accessories conforming to IS (Galvanisation is 910gms/sq. mtr)	m	550	3,300	594	3,894	2,141,700
15.2	50 x 6 mm Copper Strip	m	150	2,340	421	2,761	414,180
15.3	32 x 6 mm Copper Strip	m	446	900	162	1,062	473,652
15.4	25 x 3 mm Copper Strip	m	160	1,080	194	1,274	203,904
15.5	35x 6 mm GI Strip	m	186	1,560	281	1,841	342,389
15.6	1C x 150mm <sup>2</sup> PVC (Cu) cable Green colour	m	60	500	90	590	35,400
15.7	1C x 35 mm <sup>2</sup> PVC (Cu) cable Green colour	m	25	324	58	382	9,558
15.8	1C x 16 mm <sup>2</sup> PVC (Cu) cable Green colour	m	1200	250	45	295	354,000
15.9	CABLE TRAY - 20 X 3 GI (2 RUNS) Hot dip Galvanized 10 Holes Ø13mm ground plate 550mmx50mmx6mm earth connection bar with fixing materials/ accessories , SS hardware etc. (min. coating 120 microns of zinc).	Nos	10	1,550	279	1,829	18,290



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
16	Earthing lug	Nos	8	70	13	83	6
16.1	1C x 15mm <sup>2</sup> PVC (Cu) cable Green colour	Nos	8	22	4	26	2
16.2	1C x 35 mm <sup>2</sup> PVC (Cu) cable Green colour	Nos	4	26	5	31	1
16.3	1C x 16 mm <sup>2</sup> PVC (Cu) cable Green colour	Nos	25	185	33	218	54
16.4	SQUARE TAPE CLAMP	Nos	8	1,320	238	1,558	124
16.5	TEST LINK	Nos	415	116	21	137	56.8
16.6	TAPE CLIP	Nos	50	230	41	271	13.5
16.7	TEE JOINT						
16.8	Pile earthing: Pile earthing including all parts including required hardware and accessories	Nos	4	8,525	1,535	10,060	40.2
i)	Body Earth pit	Nos	4	7,440	1,339	8,779	35.1
ii)	Lightning Earth pit	Nos	2	6,510	1,172	7,682	15.3
iii)	Neutral Earth pit	Nos	2	6,200	1,116	7,316	14.6
iv)	Instrument earth pit						
17	GENERAL SAFETY EQUIPMENT						
17.1	3.3 kV, 900mm wide, electric grade floor rubber mat conforming to relevant IS. [SI] mark shall be there on rubber mat.	m	9	1,160	209	1,369	12.3
17.2	1.1 kV, 900mm wide, electric grade floor rubber mat (in pieces of length not less than 2 mtrs.) conforming to relevant IS. [SI] mark shall be there on rubber mat.	m	8	700	126	826	6.6
17.3	Rubber Hand Gloves of 3.3 KV grade.	Pairs	2	1,316	237	1,553	3.1
17.4	Rubber Hand Gloves of 415V grade.	Pairs	2	1,940	349	2,289	4.5
17.5	First aid box of GI, 18 SWG sheet with necessary items.	No.	1	5,425	977	6,402	6.4
17.6	DANGER PLATE (As per IS 2551)	Nos.	2	775	140	915	1.8
17.7	CABLE ROUTE MARKER	Nos.	25	465	84	549	13.7
17.8	Obtaining approval & arranging for inspection of complete installation from CEIG / Statutory Authority/Local authority Jobs includes preparation of all required documents and necessary liaisoning for getting approval.	Ls	1	310,000	55,800	365,800	365,800
C	CONTROL & INSTRUMENTATION						
C.1	Supply of New Field Instruments						
i	PRESSURE SWITCH	Nos	8	3,410	614	4,024	32.1
ii	PRESSURE TRANSMITTER	Nos	9	6,975	1,256	8,231	74.0
iii	Orifice Plate	Nos	1	2,635	474	3,109	3.10



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)		GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
				No.	395,250			
<b>C.2 SUPPLY of New Control system</b>								
i	FIRE PUMP CONTROLLER -FOR NEW MOTOR DRIVER JOCKEY PUMP-01	No.	1	395,250	71,145	466,395	466,395	466,395
ii	FIRE PUMP CONTROLLER -FOR NEW MOTOR DRIVER JOCKEY PUMP-02	No.	1	395,250	71,145	466,395	466,395	466,395
iii	FIRE PUMP CONTROLLER -FOR EXISTING MOTOR DRIVEN FIRE PUMP-01	No.	1	395,250	71,145	466,395	466,395	466,395
iv	FIRE PUMP CONTROLLER -FOR EXISTING DIESEL DRIVEN FIRE PUMP-01	No.	1	395,250	71,145	466,395	466,395	466,395
v	FIRE PUMP CONTROLLER -FOR EXISTING DIESEL DRIVEN FIRE PUMP-02	No.	1	395,250	71,145	466,395	466,395	466,395
vi	FIRE PUMP CONTROLLER -FOR NEW DIESEL DRIVEN FIRE PUMP-03	No.	1	395,250	71,145	466,395	466,395	466,395
vii	FIRE PUMP CONTROLLER -FOR NEW DIESEL DRIVEN FIRE PUMP-04	No.	1	395,250	71,145	466,395	466,395	466,395
viii	NEW MINI/MIC/REPEATER PANEL IN NEW FW/PH NEAR TCB	No.	1	395,250	71,145	466,395	466,395	466,395
ix	NEW AUTOMATION PLC PANEL FOR FIRE PUMP	No.	1	2,604,000	468,720	3,072,720	3,072,720	3,072,720
<b>C.3 Supply of New Instrument &amp; Control Cables</b>								
i	24C SM FIBER OPTIC CABLE	Mtr	6450	130	23	153	989,430	989,430
ii	RS-485 CABLE	Mtr	1705	155	28	183	311,844	311,844
iii	02CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS)	Mtr	330	230	41	271	89,565	89,565
iv	06CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS)	Mtr	1150	470	85	555	637,790	637,790
v	24CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS)	Mtr	2190	1,450	261	1,711	3,747,090	3,747,090
vi	12CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS)	Mtr	1720	830	149	979	1,684,564	1,684,564
vii	03CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS)	Mtr	640	290	52	342	219,008	219,008
<b>C.4 Supply of New Erection Materials</b>								
i	1/2" X SCH.160 -A106 GR.B -Pipe Seamless B.36.10	Nos.	20	2,840	511	3,351	67,024	67,024
ii	1/2" NPTM X 1/2" PE X SCH.160 -A106 GR.B -Pipe Nipple B.36.10 -100MM LG	Nos.	10	155	28	183	1,824	1,824
iii	3/4" NPTF X 1/2" SW 6000# -A105 -Reducing Coupling B.16.11	Nos.	10	310	56	366	3,654	3,654
iv	1/2" X SCH.160 300# -A105 -Flange S.W.R.F. 125 AA/Rh B16.5	Nos.	20	434	78	512	10,244	10,244
v	1/2" 300# SS304 SPW'D 4.5 THK Graphite Filler with C.S. Outer Ring -Gasket Spiral wound B1.620	Nos.	10	124	22	146	1,461	1,461
vi	1/2" UNC X 85 LG SA193 GRB7 & SA194 GR2H/CD Plated FT Studs with 2 Nuts & 2 Washers	Nos.	40	93	17	110	4,396	4,396
vii	1/2" NPTF X 1/2" NPTF 6000# SS316 -Two way manifold	Nos.	10	2,710	488	3,198	31,971	31,971
viii	1/2" NPTM 6000# SS316 -Plug	Nos.	10	295	53	348	3,481	3,481
ix	1/2" SW 3000# A105 -Equal Tee B16.11	Nos.	10	325	59	384	3,831	3,831
x	1/2" SW 800# A105 -Globe Valve B16.11	Nos.	10	1,780	320	2,100	21,000	21,000
xi	1/2" NPTF 3000# A105 -cap	Nos.	10	280	50	330	3,304	3,304



Sr No.	Description of Items	Unit	Quantity	Unit Rate (INR)	GST per Unit (INR)	Total Unit Rate (INR)	Total Amount (INR)
xii	Signal Junction Box (blue); Flame Proof /Ex-Proof, Die Cast ALIM6 Body, 6 Inlet+2 Outlet, suitable for hazardous area of zone 1, GROUP IIA/IIB, T3 ,having PESO/CMIFR approval. Complete in all respect accessories like Certified Flameproof /Exproof SS316 Double Compression cable glands with PVC shrouds & SS plugs for excess entries, SS 316 engraved Tag Plate, mounting clamp & SS 316 fasteners.	No.	1	4,570	823	5,393	5,393
xiii	Control Junction Box(Grey); Flame Proof /Ex-Proof, Die Cast ALIM6 Body, 12 Inlet+2 Outlet, suitable for hazardous area of zone 1, GROUP IIA/IIB, T3 or better having PESO/CMIFR approval. Complete in all respect accessories like certified Flameproof /Exproof SS316 Double Compression cable glands with PVC Shrouds & SS Plugs for excess entries, SS 316 engraved Tag Plate, mounting clamp & SS 316 fasteners.	No.	1	6,355	1,144	7,499	7,499
xiv	2" GI PIPE Structural Steel which includes angel Iron (75 X 75 X 6 mm. Thk. MS), Channel (100 X 50 X 6 mm Thk. M.S. As per IS:226), M.S. Plate (6 mm Thk. M.S.) & foundation Bolts & Nuts etc. For Inst. Pedestals (M 10 Ø X 100 mm Long. C.S. Galvanized As per IS). Structural Steel shall be used for CCTV installation on Periphery wall and wall mounting.	KG	250	217	39	256	64,015
xv	C.5 SUPPLY OF NEW CABLE GLANDS i 24C SM FIBER OPTIC CABLE ii RS-485 CABLE iii 02CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS) iv 06CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS) v 24CX2..5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS) vi 12CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS) vii 03CX2.5 MM2 (8X.02) FIRE SURVIVAL CABLE (FOR NOTIFICATION DEVICES RATING 3 HOURS) C.6 Supply of New Cables, Switches and Erection Material i Layer 2 managed Industrial Grade Switch with 8 PORT POE+ 10/100/1000 MBPS BASE-T and PORT 4 1G SFP& IP 30 NEEMA TS -2 . ii CAT 6 Cable,Accessories like Lugs, Adapter, Blank Plate & Patch Cord etc as required is included. iii HDPE Duct for 24 core OFC armoured cable . Total Cost (INR)	NOS	6	279	50	329	1,975
		NOS	28	232	42	274	7,665
		NOS	22	310	56	366	8,048
		NOS	30	550	99	649	19,470
		NOS	38	700	126	826	31,388
		NOS	22	620	112	732	16,095
		NOS	36	400	72	472	16,992
							135,346
		Nos.	2	57,330	10,323	67,673	
		Lot.	1	62,000	11,160	73,160	
		Mtrs	6700	151	27	178	1,193,806
							203,711.519

