

ANNEXURE -A



पिंपरी चिंचवड महानगरपालिका, पिंपरी - १८
जलशुद्धीकरण केंद्र सेक्टर २३ (विद्युत)

कामाचे नाव :- पवना धरणातून से क्र २३ निगडी येथील जलशुद्धीकरण केंद्रापर्यंत थेट पाईप लाईन टाकणे या कामातील विद्युत विषयक कामासाठी दर पृथःकरण करणेबाबत.

Sr. No.	Description	Unit	Rate In Rs (Excluding GST)
	<u>PLC- SCADA System –</u> For Water pumping station & water supply line.		
1	<p>Design, Supplying, Installation at site of works, testing & Commissioning of PLC- SCADA System with all necessary accessories, Software's, Hardware's, panels, etc.</p> <ul style="list-style-type: none">• Central SCADA system with 4 Clients• Standalone PLC control system• Remote telemetry units 7 numbers• Instrumentation integration• Communication over Ethernet and cellular networks• Minimum 4-hour power backup for RTU's. <p>Controller Architecture</p> <ul style="list-style-type: none">• Industrial modular PLC with high-performance multi-core processor• Minimum:<ul style="list-style-type: none">○ Program memory ≥ 10 MB○ Data memory ≥ 32 MB• Cycle time: ≤ 0.5 ms for 1000 Boolean operations• Support for:<ul style="list-style-type: none">○ IEC 61131-3 languages (LD, FBD, ST, SFC)○ Object-oriented programming (structs, function blocks) <p>Communication Capabilities</p> <ul style="list-style-type: none">• Built-in: Dual Ethernet ports• Native support (without gateway):<ul style="list-style-type: none">○ Modbus TCP○ OPC UA (server + client)○ MQTT (with TLS encryption)	Job	

	<ul style="list-style-type: none"> ○ SNMP for diagnostics <p>Capability to handle: ≥ 100 concurrent communication connections</p> <p>Cyber security</p> <ul style="list-style-type: none"> • Integrated firewall within PLC • User authentication with role-based access • Cyber security compliance in accordance to IEC 62443-4-2 SL2. <ul style="list-style-type: none"> ○ Secure protocols: TLS 1.2 or higher • Certificate-based communication <p>Expandability</p> <ul style="list-style-type: none"> • Distributed I/O support over Ethernet • I/O update time ≤ 10 ms <p>I/O System Requirements</p> <ul style="list-style-type: none"> ○ Digital Inputs: 24V DC, opto-isolated ○ Digital Outputs: Transistor type (fast switching preferred) • Analog Inputs: <ul style="list-style-type: none"> ○ 4–20 mA / 0–10 V selectable ○ Resolution ≥ 12 bit ○ Accuracy: ±0.5% or better ○ Backplane: High-speed communication bus <p>SCADA System Requirements</p> <ul style="list-style-type: none"> • SCADA shall be: <ul style="list-style-type: none"> ○ PC-based, engineering integrated platform ○ License-based with scalable tag count (minimum 2000 tags) <p>Development Environment</p> <ul style="list-style-type: none"> ○ Unified engineering tool for: PLC + HMI + SCADA configuration • Object-based graphics with reusable templates <ul style="list-style-type: none"> ○ Scripting support: IEC / high-level scripting language <p>Runtime Features</p> <ul style="list-style-type: none"> • Multi-user system with role-based access • Alarm management: <ul style="list-style-type: none"> ○ Time-stamped (ms resolution) ○ Alarm shelving, acknowledgment hierarchy ○ Historian: Built-in database , Data compression • Trends: Real-time + historical <p>Web & Remote Access</p>		
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- **Native web server (no third-party middleware)**

- HTML5-based access
- Mobile compatibility

Networking & Telemetry

- Support for:
 - Ethernet-based architecture
 - Cellular communication (4G/LTE)
- Data buffering in case of communication failure
- Auto-reconnect capability

Panel & Power System

- Industrial control panels: Proper segregation (power/control)
- Surge protection: SPD for power and communication

Engineering & Services

- PLC programming
- SCADA development
- FAT & SAT
- Training
- Documentation: As-built drawings & Software backup

Including -

A . For jack well -

SCADA Server License (NRS) – for 2K tags -1
 Operator license (2k) tags - 4
 SCADA Workstation With Monitor - 1
 SCADA Operator Station With Monitor – 6
 Router for GPRS connections (excluding data charges & Static IP cost to be paid by customer at actual) - 1
 MODBUS Gateway for collection of Energy Meter Data at each sub-station - 3
 DC24V input 32 points DI -
 Router for GPRS connections (excluding data charges & S customer at actual) - 1
 Fully wired Indoor Panel with Non redundant UPS for 4 hrs B LC with Dual Ethernet Port and required IO module with Co accessories for Jackwell Control - 1
 TR (NPN) output 32 points DO
 8Ch AI (Current/Volt))
 Cable Assembly + Terminal Board (C40HH-10SB-XBI-LT +
 PLC Panel with Complete Wiring

B. For RTU –

Router for GPRS connection - 7
 PLC with 7 inch color HMI – 7
 Fully Wired Indoor Panel with Non redundant UPS for 4 Hrs Backup -7

Device	Qty	DI	DO	AI	Tags Require
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Level	6	0	0	1	6
Pressure Transmitter	14	0	0	1	14
Power Analyzer	1	0	0	1	1
Flow Meter	3	0	0	1	3
PH Analyser	1	0	0	1	1
Turbidity	1	0	0	1	1
Actuator Valves	2	4	2	0	156
VT Pumps	1	7	2	0	108
INC VCB DI DO	1	8	2	0	120
INC VCB MFM	1	0	0	20	240
OG VCB DI DO	6	8	2	0	6
OG VCB MFM	6	0	0	20	120

Remote Terminal Units (RTU) Control Panel Device and IO List (Total 7 Sets)

Device	Quantity	DI	DO	AI	Tags Required
Flow Meter	1	0	0	1	1
Pressure Transmitter	2	0	0	1	2
Actuator Valves	2	4	2	0	12

2

Electromagnetic Flow Meter 1800 MM

Designing, providing, Installation at site , testing & commissioning of Electro Magnetic Flow meter – for Water supply system pipeline, in atmospheric temperature, horizontal fitting on pipeline. Flow - 350 MLD - 1800mm pipe.

Accessories: Din Rail Mounted SPD for Power, Junction , 25 mtrs cable

box,

Flow tube -

PRESSURE – 10 Bar

TEMPERATURE MAX. - 55°C -70°C

ACCURACY - 0.5% OF FULL SCALE READING

LINING - HARD RUBBER

Each

	<p>FLANGE STD - ANSI 150</p> <p>ELECTRODE MATERIAL - - SS316L</p> <p>MEASURING TUBE - SS304</p> <p>GROUNDING RING - SS316</p> <p>PROTECTION CLASS SENSOR - IP65</p> <p>PROTECTION CLASS TRANSMITTER - IP67</p> <p>Transmitter -</p> <p>TRANSMITTER MOUNTING – REMOTE</p> <p>DISPLAY - 16X4 ALPHANUMERIC LCD DISPLAY</p> <p>POWER SUPPLY VOLTAGE - 230V AC</p> <p>OUTPUT - 4-20 mA</p> <p>COMMUNICATION INTERFACE – HART</p> <p>SELF DIAGNOSTIC FEATURES - EMPTY PIPE DETECTION- ALARM WILL BE DISPLAYED WHEN PIPELINE IS EMPTY, FLOW DIRECTION DETECTION- FLOW WILL BE DISPLAYED WITH + OR – AS PER DIRECTION. Etc.</p> <p>TRANSMITTER - ROUND TYPE OF ALUMINUM DIE CAST WITH GLASS WINDOW. Etc.</p>		
3	<p>Electromagnetic Flow Meter 2500 MM</p> <p>Designing, providing, Installation at site , testing & commissioning of Electro Magnetic Flow meter – for Water supply system pipeline, in atmospheric temperature, horizontal fitting on pipeline. Flow - 700 MLD - 2500mm pipe</p> <p>Accessories: Din Rail Mounted SPD for Power, Junction , 25 mtrs cable</p> <p>box,</p> <p>Flow tube -</p> <p>PRESSURE – 10 Bar</p> <p>TEMPERATURE MAX. - 55°C -70°C</p> <p>ACCURACY - 0.5% OF FULL SCALE READING</p> <p>LINING - HARD RUBBER</p> <p>FLANGE STD - ANSI 150</p> <p>ELECTRODE MATERIAL - - SS316L</p> <p>MEASURING TUBE - SS304</p> <p>GROUNDING RING - SS316</p> <p>PROTECTION CLASS SENSOR - IP65</p> <p>PROTECTION CLASS TRANSMITTER - IP67</p>	Each	

	<p>Transmitter -</p> <p>TRANSMITTER MOUNTING – REMOTE</p> <p>DISPLAY - 16X4 ALPHANUMERIC LCD DISPLAY</p> <p>POWER SUPPLY VOLTAGE - 230V AC</p> <p>OUTPUT - 4-20 mA</p> <p>COMMUNICATION INTERFACE – HART</p> <p>SELF DIAGNOSTIC FEATURES - EMPTY PIPE DETECTION- ALARM WILL BE DISPLAYED WHEN PIPELINE IS EMPTY, FLOW DIRECTION DETECTION- FLOW WILL BE DISPLAYED WITH + OR – AS PER DIRECTION. Etc.</p> <p>TRANSMITTER - ROUND TYPE OF ALUMINUM DIE CAST WITH GLASS WINDOW. Etc.</p>		
4	<p>Battery, Charger and DCDB System</p> <p>Designing, Providing, installing at site of works and testing & Commissioning batteries, battery chargers and D.C.D.B. complete unit comprising of following & as per detailed specifications as under:-</p> <ul style="list-style-type: none"> • Batteries with 55 cells 2 volts each, total 110 Volts DC 200 Amp hour capacity along with all accessories. • 110 Volts. 30 Amps Battery chargers for above batteries comprising of one float charger and one float cum boost charger respectively. • D.C.D.B. comprising of two incoming double pole Miniature Circuit Breakers(MCB) 50 Amps and • 10 Nos. 10 Amps outgoing feeder with MCB or switch fuse unit complete with accessories etc. 1 set. • 2 Nos. 25 A. outgoing feeders with MCB or switch fuse unit complete with accessories. Etc. 	Job	

अटी शर्ती-

- १) वरील नमूद बाबींचे चे दरपत्रक स्पेसिफिकेशननुसार ऑनलाईन पध्दतीने महाटेंडर पोर्टलवरून (www.mahatenders.gov.in) दि.१३/०५/२०२६ ते दि.१८/०५/२०२६, दु. १२.०० वाजेपर्यंत भरावयाचे आहे.
- २) पुरवठा करणा-या कंपनी/संस्था यांचे अटीयुक्त कोटेशन स्विकारले जाणार नाही.
- ३) पुरवठा करणा-या कंपनी/संस्था यांनी वरील दिलेल्या स्पेसिफिकेशननुसार व तपशिलाप्रमाणे दरपत्रक सादर करावयाचे आहे.
- ४) पुरवठा करणा-या कंपनी / संस्था यांना दरपत्रकासोबत खालील कागदपत्रे सादर करणे आवश्यक असून ज्या कंपनी / संस्था खालीलप्रमाणे कागदपत्रे सादर करतील त्यांचेच अंदाजित दराचे पाकिट उघडण्यात येईल.
 - शॉप ऍक्ट सर्टिफिकेट
 - पॅन कार्ड

- जीएसटी प्रमाणपत्र
 - स्पेसिफिकेशन Comply Sample Chart – सोबत जोडले प्रमाणे - सही व शिक्क्यानिशी (कंपन्या/संस्था यांनी प्रत्येक उपकरणांनुसार दर GST वगळून) सादर करावयाचा आहे.
- ५) मागविण्यात आलेले दर हे केवळ अंदाजित दर (Estimate / Budgetary Cost) निश्चितीकरिता आहेत.
- ६) कोणतेही कोटेशन मंजूर अथवा नामंजूर करण्याचा अधिकार म.न.पा.ने स्वतः कडे राखून ठेवला आहे.

Sd/-

कार्यकारी अभियंता (वि.)
जलशुद्धीकरण केंद्र सेक्टर २३, निगडी.
पिंपरी चिंचवड महानगरपालिका

पिंपरी चिंचवड महानगरपालिका,
पिंपरी - १८
जलशुद्धीकरण केंद्र से २३ विद्युत
जा.क्र./ जशुके / वि/ ०१ / कावि/९१ / २०२६