

Notice Inviting Tender

PURCHASE ENQUIRY NO.: MTPL/QWS/PRYJ/01	OPENING: 02.12.2025
DEPARTMENT: E&M	CLOSING: 06.12.2025
CLIENT : NORTH CENTRAL RAILWAY PRAYAGRAJ DIVISION	PERIOD OF WORK: 1 MONTH
NAME OF WORK: QUICK WATERING SYSTEM AT PLATFORM NO. 7,8,9 &10 OF PRAYAGRAJ RAILWAY STATION.	

WORK SCOPE

Brief Description about the Project: Quick watering system is being installed with a view to meet adequate water filling in passenger coaches within limited scheduled halt. This work for quick watering system at PRYJ shall be designed, supplied, installed and commissioned to meet or to better following basic requirements)

a) For a train of 24 coach length on ICF stock quick watering system shall be able to meet water flow requirement of minimum 5184 l/min for watering within 05 minutes. (04 tanks x 450 litres each x 60% filling enroute x 1/5 (within 05 mins))

b) Similarly, for a train of 23 coach length on LHB stock, quick watering system shall be able to meet water flow requirement of minimum 5446 l/min for watering within 05 minutes. ((08 AC coaches x (685 litres x 2 + 450 litres) + 15 NAC coaches x 685 litres x 3) x 60% filling enroute x 1/5 (within 05 mins))

c) Therefore, higher flow rate i.e. 5446 litres/min shall be governing flow rate for quick watering system.

d) System shall be capable of maintaining flow rate mentioned above for minimum 02 full-length trains simultaneously for watering within 06 minutes time.

e) Quick watering system shall be integrated with existing watering hydrant available at PRYJ. Any modification required in existing watering hydrant at PRYJ for quick watering purpose shall be under Vendor's scope of work.

f) Quick watering system shall be designed and automated with a view to achieve required water flow rate with minimal electricity consumption and without any wastage of water.

g) Automation and remote monitoring shall be user friendly, easy to operate, better diagnostic and compatible for future changes.

Sl. No.	Item Description	Qty	UOM	Scope Under
1	Submission of GA, Power & control circuit diagram, complete working principle, architectural drawing, wiring diagram, logic, IO's list, termination schedule, Operation & Maintenance Manual as per technical document for approval.	1	Job	Vendor
2	Cloud based SCADA (Licensed). Internet connection with minimum 20 Mbps downlink speed will be provided by railways. At the time of commissioning temporary internet facility shall be provided by MTPL.	1	Job	Vendor
3	Control Panel (inclusion of the following (i) to (ix)) - (i) Design, fabrication, transportation, supply, erection and commissioning of LT cubical panel 3 Phase and neutral 415V. 4 Wire, free standing floor mounted, LT panel made up of 14SWG CRCA (Cold Rolled Carbon Annealed) sheet after seven tank process and painting with EPOXY powder coating. The panel shall consist of suitable rating TPN (Triple pole neutral) tinned copper bus bar supported with DMC/AMC barriers and colour coded with heat shrinkable sleeves. The metering shall be provided as specified The panel shall have short circuit with standing capacity of minimum SOKA (RMS) power frequency test and consist of the switch gear as mentioned below. The panel shall be mounted on channels including supply and fixing as per specification. The complete work has to be carried out by the vendor. All the feeder cables have to be connected to the panels with suitable cable glands as per the requirement at site. Air condition provision is to be made for entire control panel. The panel consists:- (ii) 1 No. of 400A, 4 Pole, 36KA MCCB (Moulded case circuit breaker) & 400 AP changeover for incoming (iii) 5 No. of 125A, 10KA 4 Pole MCCB out going. (iv) 1 No. of 36A, 10KA 4 Pole MCB (Miniature circuit breaker) out going (v) 5 No. of 32 A, 10KA 4 Pole MCB out going (vi) Along with multifunctional digital meter similar to model No: EM-VIPE of M/s HPL make with suitable ratios CTs (Current transformer) along with the selector switches, LED phase indication pilot lamps (3No's), and tinned copper bus bar of 1000V along with rubber chequered sheets of size 1m length of panel of 12 mm thick as per IS 5424-1 No. complete (vii) Suitable set of capacitor as per pump capacity required with auto manual APF Relay, (viii) VFD (Variable frequency Drive) 60HP 1 No. PLC 1 No. HMI, with pressure transducers. (ix) Suitable 60 HP star delta starter with auto manual selection mode and same starter will work on VFD and command will be to VFD by PLC (Programmed Logic Control). Complete with PLC CPU and required AI, AO, DI, DO cards.	1	Set	Vendor
4	Smart Control to operate QWS through mobile.	1	Numbers	Vendor
5	Connection of all type of Power & Control cables for interconnection between control panel to UPS, PC & other system and field items such as Pumps, Pressure Transmitter, Flow Meter, Electrical Valve along with all necessary accessories like glands, terminal, lugs etc.	1	Job	Vendor
6	Earthing erection with GI strip and its connection	4	Numbers	Vendor
7	Report Generation as per Approved format.	1	Numbers	Vendor

INCLUSION & EXCLUSIONS

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1	Submission of GA, Power & control circuit diagram, complete working principle, architectural drawing, wiring diagram, logic, IO's list, termination schedule, Operation & Maintenance Manual as per technical document for approval.	1	Job	Vendor
2	Cloud based SCADA (Licensed). Internet connection with minimum 20 Mbps downlink speed will be provided by railways. At the time of commissioning temporary internet facility shall be provided by MTPL.	1	Job	Vendor

3	Control Panel (inclusion of the following (i) to (ix)) - (i) Design, fabrication, transportation, supply, erection and commissioning of LT cubical panel 3 Phase and neutral 415V. 4 Wire, free standing floor mounted, LT panel made up of 14SWG CRCA (Cold Rolled Carbon Annealed) sheet after seven tank process and painting with EPOXY powder coating. The panel shall consist of suitable rating TPN (Triple pole neutral) tinned copper bus bar supported with DMC/AMC barriers and colour coded with heat shrinkable sleeves. The metering shall be provided as specified The panel shall have short circuit with standing capacity of minimum 50KA (RMS) power frequency test and consist of the switch gear as mentioned below. The panel shall be mounted on channels including supply and fixing as per specification. The complete work has to be carried out by the vendor. All the feeder cables have to be connected to the panels with suitable cable glands as per the requirement at site. Air condition provision is to be made for entire control panel. The panel consists:- (ii) 1 No. of 400A, 4 Pole, 36KAMCCB (Moulded case circuit breaker) & 400 AP changeover for incoming (iii) 5 No. of 125A, 10KA 4 Pole MCCB out going. (iv) 1 No. of 36A, 10KA 4 Pole MCB (Miniature circuit breaker) out going (v) 5 No. of 32 A, 10KA 4 Pole MCB out going (vi) Along with multifunctional digital meter similar to model No: EM-VIPE of M/s HPL make with suitable ratios CTs(Current transformer) along with the selector switches, LED phase indication pilot lamps (3No's), and tinned copper bus bar of 1000V along with rubber chequered sheets of size 1m length of panel of 12 mm thick as per IS 5424-1 No. complete (vii) Suitable set of capacitor as per pump capacity required with auto manual APF Relay. (viii) VFD (Variable frequency Drive) 60HP 1 No. PLC 1 No. HMI, with pressure transducers. (ix) Suitable 60 HP star delta starter with auto manual selection mode and same starter will work on VFD and command will be to VFD by PLC (Programmed Logic Control). Complete with PLC CPU and required AI, AO, DI, DO cards.	1	Set	Vendor
4	Smart Control to operate QWS through mobile.	1	Numbers	Vendor
5	Supply of Pump a set of 3 pump each having 60 HP Flow 320 m3/hr, Discharge Head 35m.	1	Set	MTPL
6	Supply & erection of Suction & Delivery Pressure Transducer and Pressure gauge with fitting	2	Numbers	MTPL
8	Supply & Installation of 200 mm electrically operated butterfly valve	4	Numbers	MTPL
9	Supply & Installation of Electromagnetic Digital Ultra Sonic flow meter size 200 mm	4	Numbers	MTPL
10	Supply of control cables for interconnection between control panel to UPS, PC & other system as per site requirement along with necessary accessories like glands, terminal, lugs etc.	1	Set	MTPL
11	Connection of all type of Power & Control cables for interconnection between control panel to UPS, PC & other system and field items such as Pumps, Pressure Transmitter, Flow Meter, Electrical Valve along with all necessary accessories like glands, terminal, lugs etc.	1	Job	Vendor
12	One PC system for Data monitoring, printer, mouse, 32" LED monitor.	1	Job	MTPL
13	Supply of Flexible double insulated Copper cable 4 core 3.5 sq.mm	As per actual requirement	Metre	MTPL
14	Supply of copper shielded and armoured cable of 6 core 1.5sq.mm for flow meter valve & butterfly valve wiring.	As per actual requirement	Metre	MTPL
15	Supply of copper shielded twisted armoured cable of 4 core 0.75sq.mm for flow meter data.	As per actual requirement	Metre	MTPL
16	Supply of Industrial type 2 KVA UPS with battery back up of minimum of 2 hours	1	Numbers	MTPL
17	Supply of maintenance free Earth Electrode as per RDSO specifications	4	Numbers	MTPL
18	Earthing erection with GI strip and its connection	4	Numbers	Vendor
19	Report Generation as per Approved format.	1	Numbers	Vendor

Technical Terms & Condition:

- Work should be covered in the vendor scope complete as shown in the scope of work.
- Work should be completed within 1 month from the date of drawing approval.
- Warranty should be covered for 12 month from the date of successful commissioning and an extended warranty of further 2 years should be provided for complete MCC cum PLC panel and Automation system.
- Under warranty period if any technical error occurs it can be attended within 2-3 days else SD/Witheld amount as per PO terms will be deducted @500/-per day.
- Vendor Should provide programme backup of PLC & SCADA through email along with passwords if any.
- Vendor should provide Operation Manual in hardcopy & in Soft Copy and also a operational Video to operate SCADA and Through Mobile Application as per Quich Watring approved logic.
- Make should be strictly as per approved make.
- No any deviation as per technical specification is accepted.
- Drawing & Logic as mentioned in the scope serial no. 1, should be submitted for approval within 5 days from the date of Purchase Order.
- Transportation/Frieght for material which are under the scope of vendor will be borne by vendor only.
- Lodging, Fooding or any kind of transprtation will be borne by the vendor.

Commercial Terms & Condition:

- Payment:Terms:** i) 20% advance shall be paid of purchase order value along with PO.

ii) 30% of purchase order value shall be paid on dispatch of complete supply lot of material.

iii) 30% of purchase order value shall be paid on successful commissioning of the work on joint inspection duly signed by MTPL & N.C.R Department Prayagraj.

iv) 20% of final amount shall be released on successful completion of warranty Period.
- Performance Guarantee:** Vendor has to submit 15% of PO value in the shape of PDC Cheque/FDR in the name of Meco Technologies Pvt. Ltd. as a Performance Guarantee. After successful completion of the project same will be released to the vendor.
- Security Money:** 5% of PO value as Security Money shall be deducted from each running bill @5% which shall be released after successful completion of the work.

Note: For any queries related to this enquiry may call to Aarti Sahu Head (Technical & Design) - 8269387953