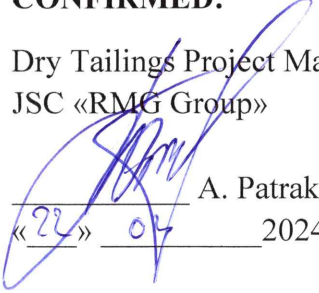


RMG Group




CONFIRMED:

Dry Tailings Project Manager
JSC «RMG Group»


A. Patrakeev
«22» 04 2024 г.

APPROVED:

Managing director for production
projects JSC "RMG Group"


A. Nemokaev
«22» 05 2024 г.

Technical requirements for process control cabinets
Tailings thickening area

Tbilisi, 2024

1. GENERAL DATA

1	Basis for purchase	Dry tailings project, enrichment plant Madneuli
2	Type of work	Construction, Greenfield
3	Customer	JSC RMG Copper, Georgia, Bolnisi region, Kazreti village area
4	Object name	Tailings thickening area
5	Project code	P23/1Dry
6	Equipment to be supplied	1. PLC cabinet; 2. RIO cabinet; 3. HMI cabinet.
7	Delivery time, until	31th of August, 2024 r.

Company must have:

- All licenses/permits to carry out the relevant type of work;
- Experience in implementing projects using control system equipment and software similar to those used in the Company;
- Availability and sufficiency of free production capacity, qualified personnel necessary to perform the scope of work specified in the technical specifications.

The list of works of the Supplier must include, but not be limited to, the following requirements:

- Collection of initial data to clarify details regarding the connection of signals of the designed equipment;
- Elaboration of design documentation for all cabinets, including wiring diagrams, specifications (bill of materials), layout drawings.
- Manufacturing, packaging and supplying cabinets;
- Providing Factory acceptance tests together with a customer.

2. WARRANTY

- Supplier must ensure that the quality of all supplied equipment meets this technical specification;
- Supplier ensures protection of all supplied equipment from manufacturing defects;
- The warranty period is 18 months from the date of completion of acceptance tests and delivery of equipment.
- Supplier is obliged to eliminate free of charge all defects in the equipment supplied to the Customer, repair and/or replace any defective/faulty components during the warranty period.

3. MAIN TECHNICAL REQUIREMENTS

No	Name/Type	Description	Quantity
PLC Cabinet			
1.1	1756-A4	1756 Chassis 4 slots	1
1.2	1756-PA72	85-265 VAC Power Supply (5V @ 10 Amp)	1
1.3	1756-L84E	Logix5580E Controller With 20 Mbytes Memory	1
1.4	1756-EN2TR	EtherNet 10-100M Bridge Module (2-Ports)	1
1.5	1756-N2	Empty Slot Filler for 1756 Chassis	2
1.6	1783-HMS16T4CGN	Stratix 5400, 16 copper 10/100 ports, 4 combo 10/100/1000 ports, Layer 2 FW, Supports 3xDLR	1
1.7	1783-SFP1GLX	1G Mbs SMF SFP	4
1.8	Cabinet IP rating	IP55	
1.9	Power supply	220 V AC 1ph from UPS	
1.10	DC Power Source	1x 24 V DC, 20A.	
1.11	Lighting, pocket for documentation	yes	
1.12	Terminals	Spring loaded type, 2,5 mm ² wire max, fuse protection for +24V terminal in each control/instrumentation loop	
1.13	Mounting	Wall-mounted	
1.14	Dimensions	1200 x 1200 x 400 mm	
1.15	Material	Enclosure frame: Sheet steel, 1.5 mm Roof: Sheet steel, 1.5 mm Door: Sheet steel, 2.0 mm Rear panel: Sheet steel, 1.5 mm Gland plates: Sheet steel, 1.5 mm Mounting plate: Sheet steel, 3.0 mm	
1.16	Surface finish	Enclosure, door and rear panel: dipcoat-primed, powder-coated on the outside, textured paint Mounting plate and gland plates: Zinc-plated	
1.17	Color	RAL7035	
1.18	Earthing	2 independent ground bars (electrical and instrumentation earthing)	
1.19	Cable entrance	Bottom	
1.20	Cooling system	FAN with dust filter	

RIO Cabinet			
General			
2.1	1783-CMS20DP	Stratix 5200 switch, 18 copper 100/1000 ports, 2 Combo 100/1000 ports, full FW, DLR	1
2.2	PLX32-EIP-PND	EtherNet/IP to PROFINET Communication Gateway	3
2.3	1783-SFP1GLX	1G Mbs SMF SFP	2
2.4	Cabinet IP rating	IP55	
2.5	Power supply	220 V AC 1ph from UPS	
2.6	DC Power Source	2 (pcs) 24 V DC Power supplies (20 A each) with Diode Redundancy module	
2.7	Lighting, portable table, pocket for documentation	yes	
2.8	Terminals	Spring loaded type, 2,5 mm2 wire max, fuse protection for +24V terminal in each control/instrumentation loop	
2.9	Mounting	Stand alone	
2.10	Dimensions	1800 x 2000 x 500 mm, 2 doors	
2.11	Material	Enclosure: Sheet steel 1.5 mm Door: Sheet steel, 2.0 mm Rear panel: Sheet steel, 1.5 mm Gland plates: Sheet steel, 1.5 mm Mounting plate: Sheet steel, 3.0 mm	
2.12	Surface finish	Enclosure, door and rear panel: dipcoat-primed, powder-coated on the outside, textured paint Mounting plate and gland plates: Zinc-plated	
2.13	Color	RAL7035	
2.14	Earthing	2 independent ground bars (electrical and instrumentation earthing)	
2.15	Cable entrance	Top and bottom	
2.16	Cooling system	2 FANs with dust filters	
Rack 1			
2.17	5094-AEN2TR	EtherNet Adapter supports up to 16 local I/O modules (includes (1) 5094-AENRTB: 5094 Adapter RTB - Screw type	1
2.18	5094-IF8	Analog input, 8-channel	10
2.19	5094-OF8	Analog output, 8-channel	2
2.20	5094-MB	Mounting base	12
2.21	5094-RTB3S	Removable Terminal Block - Spring type	12
Rack 2			
2.22	5094-AEN2TR	EtherNet Adapter supports up to 16 local I/O modules (includes (1) 5094-AENRTB: 5094 Adapter RTB - Screw type	1

2.23	5094-MB	Mounting base	12
2.24	5094-IB32	Digital input-24V DC, 32-point sinking digital input	6
2.25	5094-RTB32VS	32-point Removable Terminal Block - Spring type	6
2.26	5094-OB32	Digital output -24V DC, 32-point sourcing digital output	6
2.27	5094-RTB32CS	32-point Removable Terminal Block - Spring type	6
StandAlone HMI (mounted in a cabinet 1000 x 1000 x 300)			
2.28	6300P-240ACPMFDNB-5CBBW19NNNBNN-NN1S	VersaView 6300P Panel PC, 24"A+C488+D482:I482+D482:K483+D482+D482:I482, Panel, Multi-touch (PCAP), 16:9 1920x1080, 24 VDC isolated, Fanless , 1 PCI/PCle, Intel Core i5, 8GB RAM, Windows 10 IoT LTSC (2019), 256 GB SSD 2.5 TLC, No pre installed Rockwell Automation Software, Standard Warranty, Allen-Bradley Branded Bezel	1
2.29	Cabinet IP rating	IP55	
2.30	Power supply	220 V AC 1ph from UPS	
2.31	DC Power Source	1x 24 V DC, 10A.	
2.32	Lighting, pocket for documentation	yes	
2.33	Terminals	Spring loaded type, 2,5 mm ² wire max, fuse protection for +24V terminal in each control/instrumentation loop	
2.34	Mounting	Wall-mounted	
2.35	Dimensions	1000 x 1000 x 300 mm	
2.36	Material	Enclosure frame: Sheet steel, 1.5 mm Roof: Sheet steel, 1.5 mm Door: Sheet steel, 2.0 mm Rear panel: Sheet steel, 1.5 mm Gland plates: Sheet steel, 1.5 mm Mounting plate: Sheet steel, 3.0 mm	
2.37	Surface finish	Enclosure, door and rear panel: dipcoat-primed, powder-coated on the outside, textured paint Mounting plate and gland plates: Zinc-plated	
2.38	Color	RAL7035	
2.39	Earthing	2 independent ground bars (electrical and instrumentation earthing)	
2.40	Cable entrance	Bottom	
2.41	Cooling system	FAN with dust filter	

Elaborated by: Ruslan Suiunov

Instrumentation and Control system Engineer