


**Technical data sheet and design for the assemble of the thickener/press-filter
electrical control panel
JSC «RMG GROUP»**

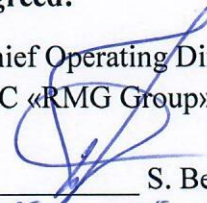
Affirm:

Chief Executive Director
JSC «RMG Group»


_____ J. Shubitidze
« » _____ 2023 y.

Agreed:

Chief Operating Director
JSC «RMG Group»


_____ S. Berezikov
«25» 05 2023 y.

Tbilisi 2023

1. GENERAL

1.1	Basis for manufacturing	Upgrade of the FSO unit, installation of an additional press filter and thickener
1.2	Type of work	Manufacturing
1.3	Contracting Authority, Legal and Postal Address	JSC RMG Group, Georgia, Bolnisi district, Kazreti village
1.4	The name of the design object	FSO unit
1.5	Property Location	JSC RMG Group, Georgia, Bolnisi district, Kazreti village
1.6	Production time	09.2023-10.2023 (from the date of conclusion of the contract and advance payment)

2. INDIVIDUAL AITE CONDITIONS

2.1	Location Type	indoor
2.2	Climatic condition - indoor	3K3 (Based on IEC 60721, no solar radiation)
2.3	Special climatic conditions	As per IEC 60271
2.4	Special climatic conditions	As per IEC 60271
2.5	Classification of chemically active substances	As per IEC 60271
2.6	Classification of mechanical conditions	As per IEC 60271
2.7	Pollution (IEC 61439)	pollution degree 3 (industrial)
2.8	Altitude	< 1000m
2.9	EMC environment	Environment A
2.10	Period of operation	25 years

3. ELECTRICAL RATING

3.1	Type of neutral earthing	TN-C
3.2	System Nominal voltage (V)	380 V
3.3	Static voltage variation	±5%
3.4	Instantaneous voltage variation	±10%
3.5	Rated insulation voltage (Ui)	1000 V
3.6	Overvoltage Category	IV
3.7	Impulse withstand voltage	12 kV
3.8	Rated frequency (fr)	50 Hz
3.9	Frequency variation	+/- 0.2 Hz (Normal) / +/- 0.4 Hz (Maximum)
3.10	Rated current (InA) (Incomer & Busbar)	1000A
3.11	Rated current (Inc) for (Feeders)	Refer Consumer list
3.12	Prospective short-circuit current at supply terminals Icp (kA)	65 kA
3.13	Duration of Icp (tcp)	1 sec
3.14	Control voltage individually protected by MCB	per bus section
3.15	Auxiliary supply voltage:	

	- Space heater and panel illumination - Contactors - MCU / Soft Starter / VSD control supply - ACB spring charging, closing and tripping indication, Numerical relays	220V AC 220V AC 24 V DC, redundant (grounded minus) from AC UPS supply 220 V AC UPS SUPPLY
3.16	Signal interface with DCS	TO BE CONSIDERED
3.17	Communication protocol	Ethernet IP
3.18	Signal interface with Package Unit PLC	TO BE CONSIDERED

4. MECHANICAL DATA

4.1	Number of cubicles	As per Consumer list (to be considered)
4.2	Installation method	floor standing
4.3	Room floor design	concrete floor
4.4	Protection class (IP coding)	IP 42 (closed doors), IP 20 (open doors)
4.5	Cabinet lights and convenience outlets	as per vendor standard
4.6	Cabinet space heaters	YES in cable connection compartments
4.7	Options:	Insulated busbars
4.8	Access to manually operated devices	authorized person
4.9	Location of manually operated devices	Easily accessible
4.10	Form of internal separation IEC 61439-2 Table 104	Form 3b
4.11	Power connection conductor mat.	copper
4.12	Power connection type / location	from top
4.13	Applicable for	Motor Starters (FVNR / FVR, softstarter, VSD)
4.14	Method of functional unit connection	W = withdrawable
4.15	Status indication	<input checked="" type="checkbox"/> RUN; <input checked="" type="checkbox"/> OFF; <input checked="" type="checkbox"/> Ready; <input checked="" type="checkbox"/> Fault
4.16	Measurement device	as per vendor standard
4.17	Types of feeders	as per consumer list (and to be discussed)

5. ADDITIONAL INFORMATION

5.1	Manufacturer shall	<ul style="list-style-type: none"> - SLD - wiring diagrams (each feeder) - logic diagram - technical passport
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		<ul style="list-style-type: none">- certificate of conformity- FAT protocols- installation manual- operation and maintenance manual
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Составил: В. Кочнев



ATTACHEMENT (CONSUMER LIST)

N O Z O N E	DE SC R.	IT E M	EQUI PMEN T TAG	Equipme nt Descripti on	Equipment Name	Suppl y by	Equipment sizing done by	Model	Cri tic al Lo ad	V F D	PO WE R, kW Inst alle d	St b y	M C C	P L C
32 5	RA	00 1	325- RA- 001	RAKE MECHANI SM	Zn TAILINGS THICKENER RAKE MECHANISM	Metso Outote c	Metso Outotec		X		5,5			
32 5	TH	00 1	325- TH- 001	THICKENE R	Zn TAILINGS THICKENER	Metso Outote c	Chemitec	HCT - 12 m	X		1,5			
32 5	PP	00 1	325- PP- 001	PUMP	Zn TAILINGS THICKENER UNDERFLOW PUMP	Metso Outote c	Metso Outotec / Chemitec	HR100 FNR-S C4		X	4			
32 5	PP	00 2	325- PP- 002	PUMP	Zn TAILINGS THICKENER UNDERFLOW PUMP	Metso Outote c	Metso Outotec / Chemitec	HR100 FNR-S C4		X	4	X		
32 5	AG	00 2	325- AG- 002	AGITATO R	AGITATOR FOR Zn TAILINGS FEEDER SURGE TANK	SPX Flow	SPX Flow		X	X	55			
32 5	PP	00 5	325- PP- 005	PUMP	Zn TAILINGS PRESSURE FILTER FEED PUMP	Metso Outote c	Metso Outotec / Chemitec	HM200 FHC-S C5		X	90			
32 5	PP	00 6	325- PP- 006	PUMP	Zn TAILINGS PRESSURE FILTER FEED PUMP	Metso Outote c	Metso Outotec / Chemitec	HM200 FHC-S C5		X	90	X		
32 5	FL	00 1	325- FL-001	FILTER PRESS	Zn TAILINGS FILTER	Diemm e	Chemitec/Di emme	ME 2000 F13			49,6 2			X

325	PP	007	325-PP-007	PUMP	Zn TAILINGS FILTRATE RELEASE PUMP	Metso Outotec / Chemitec	Metso Outotec / Chemitec	HM100 FHC-S C4	X	7,5		
325	PP	008	325-PP-008	PUMP	Zn TAILINGS FILTRATE RELEASE PUMP	Metso Outotec / Chemitec	Metso Outotec / Chemitec	HM100 FHC-S C4	X	7,5	X	
325	CV	001	325-CV-001	BELT CONVEYOR	CONVEYOR	Birikim	Birikim	St-630		9,2		
325	CV	002	325-CV-002	BUCKET CONVEYOR	BUCKET CONVEYOR	Birikim	Birikim	5EP 125 2+2		2,2		
325	SP	001	325-SP-001	SUMP PUMP	SUMP PUMP FOR Zn TAILINGS THICKENER AREA	Metso Outotec / Chemitec	Metso Outotec / Chemitec	VSHM100 L120 C5 HC	X	7,5		
325	SP	002	325-SP-002	SUMP PUMP	SUMP PUMP FOR Zn TAILINGS FILTER FEED TANK AREA	Metso Outotec / Chemitec	Metso Outotec / Chemitec	VS50 L80 O4D75 HC	X	1,5		
325	SP	003	325-SP-003	SUMP PUMP	SUMP PUMP FOR Zn TAILINGS FILTRATION AREA	Metso Outotec / Chemitec	Metso Outotec / Chemitec	VS50 L80 O4D75 HC	X	1,5		
325	PP	009	325-PP-009	PUMP	RINSE WASHING PUMP	Diemme	Diemme	Centrifugal pump	X	160		
325	PP	010	325-PP-010	PUMP	HIGH PRESSURE WASHING PUMP	Diemme	Diemme	Piston type pump	X	37		