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Data Sheet for XRF analyzer
(XZ) 3/4-33-0920-02

01	08/09/2024	Issued For Approval				
00	07/13/2024	Issued For Review				
Rev.	Date	Description	Prepared By	Checked By	Approved By	Authorized By

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1. XRF ANALYZER DATASHEET

No.	Description	Units	Value	Vendor data
1	General data			
1-1	Quantity	#	1 Operational & 0 Standby	
1-2	Tag No. / Location (indoors/ outdoors)	-	XZ 3/4-33-0920-02/Indoor	
1-3	Application Description	-	Flotation Analysis	
1-4	Duty	Continuous/ Intermittent/ Standby	Continuous	
1-5	Site Condition	-	4-12002-D-PR-DOC-303-GNL-001	
Process / Operating Conditions				
2	Material Processed			
2-1	Material Handled	-	Copper Concentrate	
2-2	Streams Analyzed	#	14	
2-3	Flow-rate per stream	m ³ /h	VTS	
2-4	Feed stream top size	micron	150	
2-5	Min Slurry Feed Density	t/m ³	1.07	
2-6	Max Slurry Feed Density	t/m ³	1.28	
2-7	Min Solids Density	t/m ³	2.8	
2-8	Max Solids Density	t/m ³	4	
2-9	Stream Temperature	°C	5 to 60	
2-10	Stream pH	-	11.5 – 12.5	
2-11	In line or Tank Mounted	-	In line	
2-12	Pressure	bar	VTS	
Mechanical information				
3	Technical specs			

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No.	Description	Units	Value	Vendor data
3-1	Supplier	-	VTs	
3-2	Type	-	VTs	
3-3	Model / Size	-	VTs	
3-4	Cleaning System	-	VTs	
3-5	Inlet Pipe Size	mm	VTs	
3-6	Outlet Pipe Size	mm	VTs	
4	Unit Dimensions			
4-1	Overall Height	mm	VTs	
4-2	Overall Width	mm	VTs	
4-3	Overall Length	mm	VTs	
5	Masses			
5-1	Max Mass for Erection	kg	VTs	
5-2	Total Mass (empty)	kg	VTs	
Electrical information				
6	Electrical			
6-1	Supply voltage	V	400V±10% (VTs)	
6-2	Frequency	Hz	50Hz±5% (VTs)	
6-3	Motor type	-	VTs	
6-4	Installed motor power	kW	VTs	
6-5	Number of poles	#	VTs	
6-6	Motor speed	rpm	VTs	
6-7	Motor operation	-	VTs	
6-8	Rotation (CCW/CW)	-	VTs	
Sampling handling system				
7-1	Analysis Time per Stream	sec	30-60 (VTC)	
7-2	Sampling	-	Automatic	

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No.	Description	Units	Value	Vendor data
7-3	Analyse	-	Automatic	
7-4	Process Connection	-	VTS	
7-5	Wetted Part Material	-	Stainless Steel 3161Ti (VTA)	
7-6	Sampling Handling System	-	Completely wired and ready for use for 11 lines including interconnection piping and tubing, sample handling station, analyzer (VTC)	
Analyzer				
8-1	Measuring principle	-	(VTS)	
8-2	Element Range	-	Aluminum to uranium	
8-3	Number of Elements	-	Fe, Cu, Mo, S, ... with standby channel (VTS)	
8-4	Radiation Source	-	X-ray tube (VTS)	
8-5	Pulse Count Rate	pulses/second	Up to 50,000 (VTC)	
8-6	Accuracy	-	The measurement accuracy depends on sample properties (matrix composition, mineralization and particle size). A relative accuracy is typically between 0.1 % and 0.5%. (VTC)	
8-7	Repeatability	%	$\sigma < 1$	
8-8	Stability	%	0.1	
8-9	Measurable Connection Range	%	0.001–100 by weight. (VTC)	
8-10	Enclosure Class	-	IP65	
8-11	Integrated Calibration Sampler	-	Required	
8-12	Type of Cleaning System	-	Automatic	
8-13	Output Signal	mA	4-20	
8-14	Body Material	-	VTS	

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No.	Description	Units	Value	Vendor data
8-15	Data communication	-	VTS	
Controller				
9-1	PLC System	-	Required including: PLC system, I/O card, keyboard of front panel door, ... with connection TCP/IP, Profibus Dp, hardwire (4-20 mA) , ProfNet (preferred). (VTC)	
Utilities				
10-1	Instrument Air Main Specification Pressure	Barg/°C	8 (VTC)	
10-2	Water Specification Pressure	Barg/°C	4 (VTC)	
10-3	Multiplexer instrument Air Consumption	Am³/h	VTS	
Flushing system				
11-1	Multiplexer Flushing water Consumption	m³/h	VTS	
11-2	XRF Flushing water Consumption	m³/h	VTS	

Notes:

1. VTS: Vendor to Specify
2. VTC: Vendor to Confirm
3. Vendor shall provide and issue the important data required to design the related structure / foundation.