

BOTA Ion Concentration Online Analyzer

Introduction

BOTA ion concentration online analyzer is the first and patented online analysis instrument for mineral slurry by BGRIMM Group domestic and international. BOTA ion analyzer uses mature wet chemical analysis methods, combined with advanced process sampling technology, sample pretreatment technology, solution precision metering and control technology, signal processing technology, etc., to achieve fully automatic analysis of pH (acidity), cyanogen ion and metal ion concentration.

BOTA analyzer has significant advantages such as high measurement accuracy and high reliability. It can completely solve the problems of on-line measurement of respective ion concentration in pulp of beneficiation and metallurgy process and closed-loop control of process automation, also can realize the intelligent control of the whole beneficiation and metallurgy process and improve the production index and economic benefits of beneficiation and metallurgy.



Performance

The BOTA can realize the on-line measurement of pH, acidity, cyanide ion, metal ion and other parameters. The corresponding instrument models are BOTA-PH, BOTA-CN, BOTA-CU etc. It can also accept customized design.

The technical parameters of typical ions are as follows:

BOTA-PH Online slurry pH (acidity) analyzer

Test parameters	Detection principle	Measuring range	Accuracy	Number of sample flow streams	Measurement cycle	Communication interface	Man machine interface
pH, acidity	photometric titration and colorimetry	pH>8 or pH<6, strong acid, strong base	better than 0.1 pH	1~2(1 host with 1~2 measuring points)	10 minutes	Modbus TCP or defined communication mode	HMI touch screen

BOTA-CN Online cyanide ion analyzer for mineral slurry

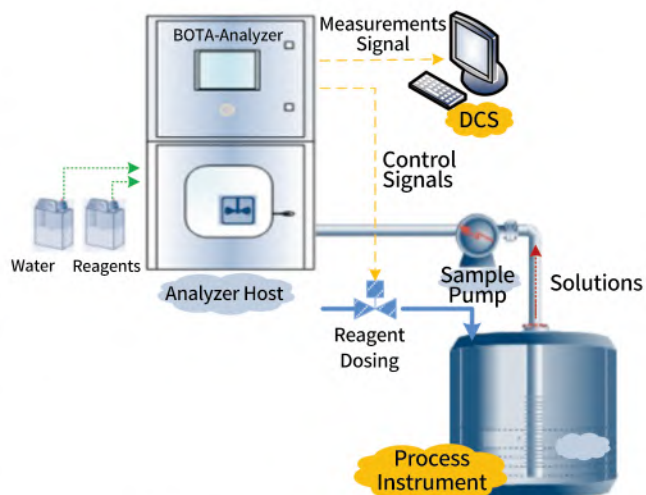
Test parameters	Detection principle	Measuring range	Accuracy	Number of sample flow streams	Measurement cycle	Communication interface	HIM
free cyanide ion	photometric and potentiometric titration	1ppm ~ 10000ppm (can be extended according to user requirements)	FS deviation < 5%	1 ~ 3 (1 host with 1 ~ 3 measuring points)	10 ~ 20 minutes	Modbus TCP or defined communication mode	HMI touch screen

BOTA-M online metal ion analyzer for mineral slurry

Test parameters	Detection principle	Measuring range	Accuracy	Number of sample flow streams	Measurement cycle	Communication interface	HIM
copper ion, nickel ion and other metal ions	complexometric titration, photometric colorimetry	0.5 g / L according to user requirements	FS deviation < 5%	1 ~ 3 (1 host with 1 ~ 3 measuring points)	10 ~ 20 minutes	Modbus TCP or defined communication mode	HMI touch screen

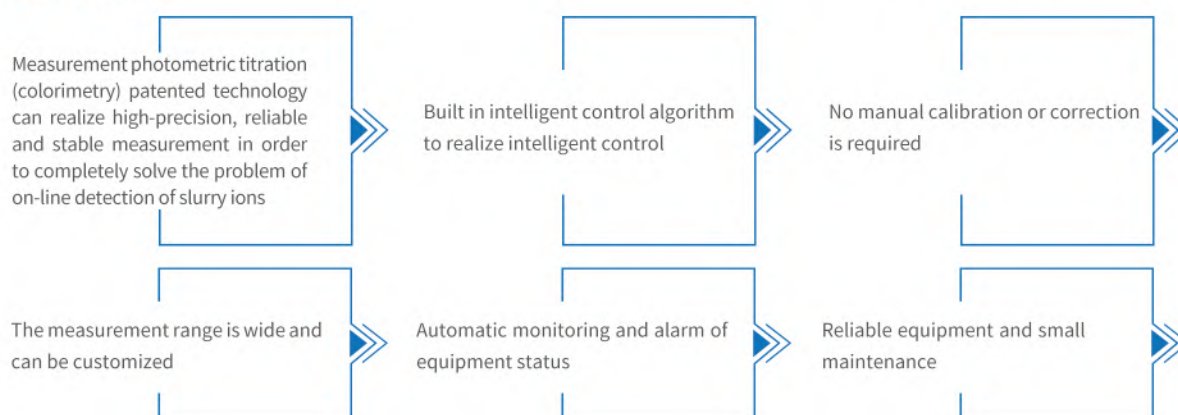
Structure

BOTA analyzer consists of analyzer host and sampling device. The slurry sampling and pretreatment device samples the slurry from the equipment, and also processes the slurry into a clear solution that can be analyzed, then transmits it to the measuring host unit. The analyzer host completes the measurement of titration and colorimetry of samples, obtains the measurement results and transmits the results to DCS system. At the same time, the instrument is equipped with special intelligent control algorithm, which can directly control the intelligent addition of lime, sodium cyanide and other agents through DCS system.



Features

BOTA Analyzer System Composition



Compared with traditional measuring instruments, BOTA analyzer has significant technical advantages and characteristics. Taking BOTA-PH as an example, compared with the traditional pH meter, the measurement and control performance advantages are as follows:

Performance Index	BOTA-PH Analyzer	Electrode pH meter
Range	pH >8 or pH <6, strong acid, strong base	pH 0~14
Accuracy	0.05pH	0.5 pH
Calibration	No calibration required	Manual frequent correction
Maintain	Replace the filter element and replenish the reagent every week	Electrode cleaning and calibration (daily)
Reliability	Results have high reliability and can be used for closed-loop control of drugs	The electrode is easily polluted in low reliability and difficult to be used in closed-loop control
Closed-loop	Built in special intelligent pH control algorithm	Conventional PID control or no closed-loop

Operating Conditions

Weight

Host: 520(L) × 800
(W) × 1700(H) mm
50Kg

Water and reagent

Flushing water: clean tap water, normal pressure, < 60L / D
Titration (calibration) reagent: prepare < 1L / D as required
Cleaning acid: 5% dilute acid < 0.5L/d

Power supply

Host: AC 220V + 10%, - 15% 2A 50Hz or customized
Sampler: AC 380V
0.55kw

Air supply

Clean instrument air source: 0.5 ~ 0.6MPa, 0.1nL/min
Ordinary gas source: 0.3 ~ 0.4MPa, 1nL / min