

Oil Analysis Spectrometer

ATO800

Features

Reduce equipment maintenance costs Optimize operation safety factor Improve device attendance Extend the service life of the equipment Reduce equipment downtime Improve device management Reduce oil consumption Equipment has a wide range of applications Built-in working curve Multi-panel design Standard configuration simultaneously determines 24 elements

Application

Military aviation oil testing Ship and rail transit oil testing Electric power (nuclear power, wind power) oil testing Mineral and petrochemical industry oil testing Mechanical Engineering Oil Analysis Oil product analysis by colleges and testing institutions

Description

ATO800 Oil Analysis Spectrometer (OAS)—also known as Rotating Disc Electrode Optical Emission Spec-trometer (RDE-OES), oil spectral analysis can provide early warning of major failures of equip-ment, through real-time analysis and trend analysis of the spectral analysis data, you can identify potential hidden dangers of equipment in advance, optimize maintenance plans, reduce equipment failure rate, realize proactive preventive maintenance, and accordingly greatly reduces operating costs.

ATO800 is widely used in military, aviation, shipping, nuclear power, wind power, electric power, petro-chemical, mining, rail transit, construction machinery, university scientific research, oil testing institutions and other fields of oil quality monitoring, equipment wear monitoring and fault diagnosis and analysis, is a standard analytical mean in the field of oil analysis.



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1. parameter

AT0800					
Optical system	Optical system	Pashen-Runge, Roland circle optical structure			
	Focal length	500mm			
	Optical resolution	0.006nm			
	Spectral range	190-900nm			
	Double chamber system	Short wave chamber wavelength: 200~470nm Long wave chamber wavelength: 470~800nm			
	ligh-performance holographic diffraction grating, Grating notching 2700L/mm				
	Both Roland circle and the host machine are equipped with a constant				
	temperature system to maintain constant temperature independently, 40±1°C;				
	the constant temperature is adjustable, which is effectively suitable for too high or too low environment temperature condition				
Excitation	Bidirectional high performance excitation light source,14000V ignition pulse, digital discharge parameter setting, digital pulse generator, digital offline pulse control				
light source	Dual-phase zero-crossing signal detection technology, avoiding high-voltage spark				
	electromagnetic compatibility interference, and improving voltage stability				
Detector	Cluster optical fiber signal transmission dual-layer,multi-CCD detection spectrum system The linear array of multiple CCDS is arranged in a Roland circular shape, which				
	realizes continuous and simultaneous detection of the whole band, and facilitates later development of other elements				
	High performance CCD detector, each CCD with 3648 pixels				
	Ultraviolet band spectral enhancement detection technol ogy, enhances the ultraviolet band light intensity, and prolongs the life				
Excitation chamber	Rod electrode holder for automatic adjustment of electrode pole distance device, ensure that the height of electrode spacing is consistent for all measurements				
	The excitation room has a visual window, which can visualize the whole excitation process				
	Complete safety monitoring and protection functions, including excitation chamber door safety lock, sample cup, disc electrode, rod electrode, spark gap sensing monitoring device (laser light source automatic position ing), with safety alarm and automatic flameout function, so as to ensure user safety				
	Semi-permeable cutoff to prevent oil sputtering contami nation and filter stray light				
	Aluminum fire extinguishing device, to prevent volatile sample ablation to produce flames				
Computer	Operating system: Instrument control and data manage ment software based on				
system	Windows platform				



	External connection of the control computer			
Power supply and environment requirements	Power	220V±10%, 50/60Hz, AC power, Built-in pressure stabilizing device, no special grounding device is required		
	Power consumption	≤1kw		
	Fusing current	16A		
	The range of operating temperature	-40~50°C		
	The variation allowance of the maximum temperature	±5℃/h		
	Operating humidity	0~90%, no condensation		
	Working altitude	≤7000m		
Specification	Size	1040mm(length) X460mm(width) X700mm(height)		
	Weight	125kg		

2. Technical Principle



3. Measuring Range

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No.	Element's name	Element's symbol	Measuring range (ppm)
1	Aluminum	AI	0-1000
2	Barium	Ba	0-6000
3	Boron	B	0-1000
4	Cadmium	Cd	0-1000
5	Calcium	Ca	0-6000
6	Chromium	Cr	0-1000
7	Copper	Cu	0-1000
8	Iron	Fe	0-1000
9	Lead	Pb	0-1000
10	Magnesium	Mg	0-6000
11	Manganese	Mn	0-1000
12	Molybdenum	Мо	0-1000
13	Nickel	Ni	0-1000
14	Phosphorus	P	0-6000
15	Silicon	Si	0-1000
16	Silver	Ag	0-1000
17	Sodium	Na	0-6000
18	Tin	Sn	0-1000
19	Titanium	Ti	0-1000
20	Vanadium	V	0-1000
21	Zinc	Zn	0-6000
22	Potassium	К	0-1000
23	Lithium	Li	0-1000
24	Antimony	Sb	0-1000



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