



MODEL WLD-4C OPTICAL EMISSION SPECTROMETER

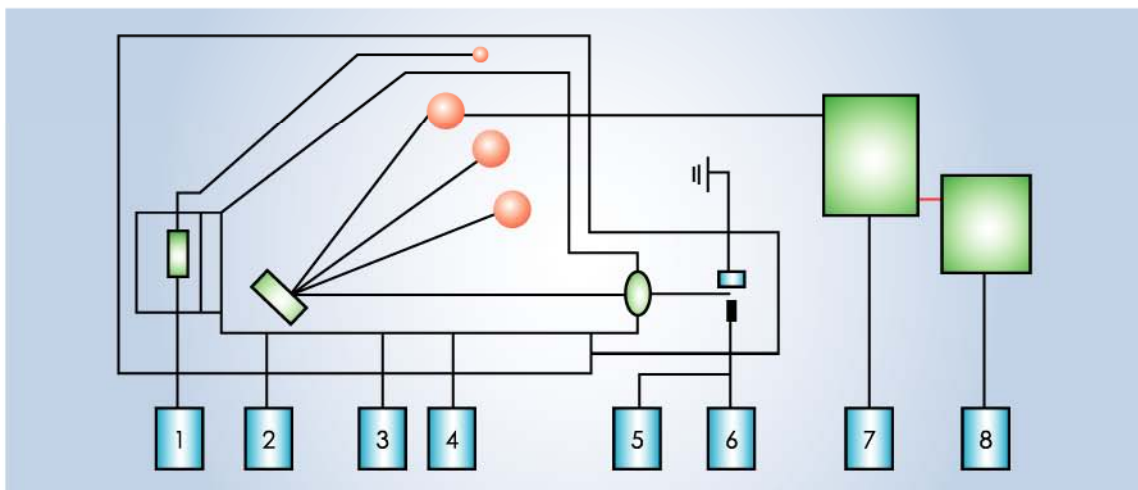
APPLICATIONS

WLD-4C OPTICAL EMISSION SPECTROMETER can be widely used in the fields of casting, metallurgy, machine manufacturing, shipbuilding, automobile manufacturing, and chemical industry etc. It is a necessary instrument for on-the-spot sample analysis in metallurgy plants and for metal material inspection in quality inspection Labs etc.

FEATURES

- Various metal bases can be analyzed: ferrous metals of Fe, Co, Ni and Ti base, and non-ferrous metals of Cu, Al, Pb, Mg, Zn and Sn base.
- Adopting the exciting source with high reproducibility and stability. The exciting frequency can be changed in the range of 150~600Hz to match the material to be analyzed and get the best analytical results.
- Adopting highly integrated data collecting and controlling system with high automation.
- High-speed analysis with high antijamming ability, good reproducibility and stability.
- Reasonable design with more integrated construction.
- Windows based software with easy and simple operation.
- In-built data base allowing long-distance data transfer.
- Quality control diagram can be established automatically for easy quality control and monitoring.
- High vibration resistance ability. It's not necessary to make vibration resistance base.
- Partial thermostat system for fewer requirements to the environment.

INSTRUMENT COMPOSITION:



1. Thermostat system 2. Spectroscope system 3. Vacuum system 4. Gas-filling system
5. Exciting source 6. Argon supply system 7. Measurement and control system 8. Data Processing system

TECHNICAL DATA

Exciting source

Power voltage: 50Hz, 220V \pm 10%

Input power: 1.0KVA

Spectroscope:

Spectral range 175~450nm

Grating: 2400 L/mm concave grating in radius of 0.75m;

Blazed at 300nm (1st order);

Ruled area: 30X50mm²;

Reciprocal linear dispersion: 0.55nm/mm;

Entrance slit width: 20um

Exit slit width: 50/75um

Maximum number of channel: 36

Constant temperature: 30°C \pm 0.1°C

Measurement and Control System

Measuring mode: sectional integration

Measuring reproducibility: RSD \leq 0.2%

PMT high voltage power supply: voltage: -1000v,
stability: better than 0.5% (8h)

PMT high voltage adjustment: controlled by PC

Data Processing System

Industrial controlled built in PC, LC D display.

Software: under Windows Operating system

DIMENSIONS

Main Unit:

1500(L)×1000(D)×1200(H)mm

Area required: 15~20 square meters

Weight: about 450kg

LABORATORY REQUIREMENTS

Environment: temperature: $20^{\circ}\text{C} \pm 5^{\circ}\text{C}$; relative humidity: < 70%

Purity of Argon gas: 99.999%

Power supply: AC $380\text{V} \pm 10\%$ 50Hz 3KW, 3-phase, 4-line.

Ground lead: An independent ground lead should be used for the spectrometer itself. Grounding wire resistance < 2ohm.

Analytical range for some major elements in ferrous metals:

Element	Content %	Channel	Element	Content %	Channel
Fe	0.002~0.50	1	Bi	0.001~0.50	1
P	0.001~2.0	1	La	0.005~0.50	1
S	0.001~0.35	1	Ce	0.005~0.50	1
B	0.0005~0.20	1	Si	0.001~5.0	1
Sn	0.002~0.50	1	Mg	0.005~1.0	1
Sb	0.002~0.50	1	Mn	0.001~20.0	1
As	0.001~0.30	1	Al	0.001~6.0	1
C	0.0025~4.0	1	V	0.0005~6.0	1
Mo	0.001~10.0	1	Ti	0.005~3.0	1
W	0.01~22.0	2	Co	0.002~15.0	2
Cu	0.005~2.5	1	Pb	0.005~0.50	1
Ni	0.001~30.0	2	Nb	0.005~3.0	1
Cr	0.001~30.0	2	Zr	0.005~0.10	1

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Analytical range for some major elements in non-ferrous metals:

Element	Content %	Channel	Element	Content %	Channel
P	0.005~2.0	1	Sb	0.005~0.50	1
Sn	0.002~10.0	2	Al	0.0005~0.50	1
Zn	0.01~10.0	2	Cd	0.005~0.50	1
Si	0.005~20.0	2	As	0.001~0.10	1
Fe	0.005~10.0	2	Bi	0.002~0.50	1
Cu	0.005~10.0	2	Be	0.002~0.50	1
Mg	0.005~10.0	2	Zr	0.002~3.0	1
Mn	0.002~3.0	1	La	0.001~0.50	1
Ti	0.005~1.0	1	Ce	0.001~0.50	1
Ni	0.005~3.0	1	Pr	0.001~0.50	1
Cr	0.005~3.0	1	Nd	0.001~0.50	1
B	0.002~0.50	1	Ga	0.0005~0.50	1
V	0.002~0.50	1	Sr	0.002~0.50	1



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