

DF-170 OES



Introduction

- 1) The DF-170 OES is mainly used for analysis up to 3 metal matrix composites. Digital light source with customizable excitation parameters is available for various metals, enabling more stable analysis.
- 2) Brand-new standardized module design; highly-integrated circuit; independent charging system;
- 3) All exit slits are on one belt with easy addition if needed.
- 4) Parts with high quality: core parts from the world well-known manufacturers.
- 5) Oil backstreaming prevention is achieved by creating a vacuum environment in the optical chamber, making no vaporized oil come through. A computer-controlled vacuum pump enables its working time less than 5% of the total DF-170 working time,

largely extending the pump life.

6) A built-in light reduces the dark current in PMT to a great extent, which results in an improved S/N and an extended life of PMT (28mm in diameter).

7) Custom working curves can be made, coupled with special calibration software to fend off spectral and background interference. This will cut the effects of metals' metallurgical history and improve their analytical outcome.

8) Highly-precise thermostatic system can keep the range of temperature fluctuation between -0.2°C and +0.2°C.

9) Automatic plotting technology is applied to optical calibration to position smartly the entrance slit.

10) User-friendly operational software with multiple language versions under WINDOWS operating system.

11) The multipurpose operational software can meet your various needs by displaying elemental data in a flexible way and supporting various printing formats.

12) 10-20s of analytical process

Specifications

| | | |
|------------------------------------|--|--|
| optical system | structure | Paschen-Runge |
| | focal length | 750mm |
| | holographic original concave grating | 2400 ruled lines/mm |
| | wavelength range | 140-750nm |
| | dispersive power | First order 0.55nm/mm |
| | vacuum optical chamber with auto thermostatic system | 30±0.2°C vacuum range: 1.2-2.5 Pa |
| light source system | light source | multifrequency digital controlled light source |
| | discharge current | 10-200A |
| | excitation frequency | 100-800Hz |
| | discharge duration | 10-10000μs |
| spark stand | excitation chamber with minimum argon use | |
| | easily-changeable foundation(lid) | |
| | mobile hold-down pin | |
| data collection and control system | dynamic integration technology | |
| | highly-sensitive PMT detector | |
| | high-speed 12-bit A/D conversion | |
| | real-time control on temperature and vacuum state | |
| others | matrices | Fe, Cu, Al, Ni, Zn, Mg, Pb, |

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|--|---------------------------|--|
| | | Co, Sn, Ti, etc. |
| | application | micro and macro elements, N element and pure metals |
| | channel configuration | 3 matrices and 48 channels at most |
| | dimensions(mm) | 1420*880*1320 |
| | environmental requirement | T 10°C-35°C H 20%-80% |
| | weight | 400Kg (net weight), 470Kg (gross weight) |
| | V/F | AC220V±10%/50Hz |
| | power | max 1500VA standby 300VA |
| | argon | purity≥99.994% press≥0.3MPa |