SECOPTA
laser based sensor systems

MopaLIBS®
Multi-element Analysis System

- High throughput
- Rugged and customisable
- Even on dusty surfaces

Measuring system for inline multi-element LIBS analysis in harsh industrial environments

Technical Spezification MopaLIBS®

Working Principle	Laser Induced Breakdown Spectroscopy (LIBS)
Laser Source (laser class 4)	Master Oscillator Power Amplifier (MOPA), Seed: microchip Laser, Wavelength: 1064 nm Pulse peak power: > 1 MW, Repetition rate: up to 20 kHz (up to 100 kHz on demand)
Spectrometer	Spectral range: 190 - 1000 nm, Measuring resolution: 0.05 - 1 nm, depending on application Evaluation of individual spectra or analytic objects for maximum precision.
Analysis frequency	Evaluation rate: up to 350 results/ s (more on demand)
Dynamic Focusing	Focus lift: 100 mm, Tracking speed: 7.0 mm/ms
Control Unit	Industrial PC on Win 7 Embedded, Interfaces: USB, Ethernet, DVI, Modbus, other on request LIBS-Software Suite for data collection, visualization and fully automated analysis
Ambient conditions	T: +5 to +40 °C, non-condensing humidity
Electrical Supply	U: 230 VAC, P: 1.2 kW
Dimensions	Height x Width x Length: 705 (790) x 300 x 1100 (1510) mm, Weight 150 kg

User´s benefits & typical MopaLIBS® applications

User´s benefits

- All-in-one dust protected housing in IP63 design
- Purge air management for dust protection of the optics
- Innovative robust and low-maintenance laser source
- Fast multi-element analysis for high throughput
- Easily to operate by remote control and TCP/IP communication
- Ideally suited for sorting and monitoring tasks in industrial processes through dynamic focus tracking

Applications

- Identifikation of different material classes by multi-element classification,
  e.g. steel and aluminium srap and recycables for subsequent sorting
- Simultaneous identifikation of a big number of classes by multi-element classification with only one sensor,
  e.g. material in non-ferrous fractions of waste resources for subsequent sorting
- Identifikation of high valuable subclasses by quantification of the content of defined elements
  e.g. alloys of steel and aluminium or refractories for subsequent selective sorting
- Application methods for online quantitative or qualitative evaluation of spectra
- Identifikation of subclasses by quantification of the content of defined elements,
  e.g. alloys of steel and aluminium in quality assessment
- Investigation of surfaces and coatings and identifikation of process material in move,
  e.g. quality assessment of aluminium alloys in rolling mills and extrusion plants

Other LIBS equipment for other applications

- For inline process analysis particulary in the quality inspection we offer our **FiberLIBS® *inline***.
- For laboratory applications in material science and industrial quality control we offer our **FiberLIBS®** lab.

MopaLIBS v3.0 1408

SECOPTA GmbH
Ostendstr. 25
12459 Berlin, Germany

+49.30.5304-1360
info@secopta.de
www.secopta.de