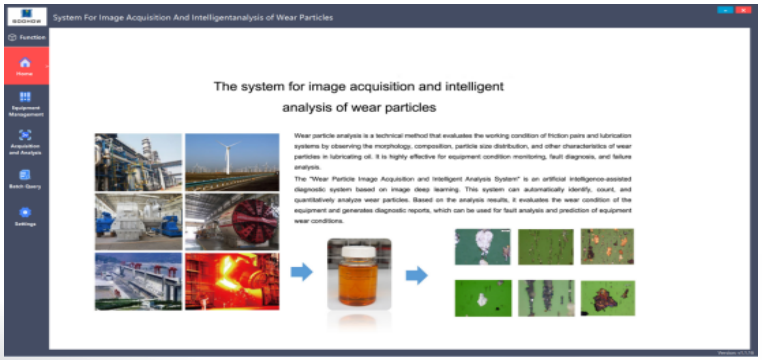
Intelligent Abrasive Particle Analysis System

高稳定 高性能 尺寸紧凑



MAIN FEATURES

■ Selection of High-Speed Microscope Camera

（1）The camera is equipped with a 1”（13.06×8.76mm) ultra-large target surface CMOS sensor, enabling single-shot acquisition to cover a broader field of view.

（2）It supports real-time signal acquisition at up to 60fps (at 1824×1216 pixels) and up to 20 million pixels (5440×3648 pixels at 15fps).

（3）The acquisition interface adopts a standard C-mount, compatible with mainstream microscopes in the market. The data interface uses USB 3.0 standard for high-speed and stable transmission.

（4）The image acquisition algorithm employs dual-layer noise reduction technology, featuring ultra-high sensitivity and ultra-low noise. It supports settings such as automatic exposure, gain adjustment, one-click white balance, saturation adjustment, gamma correction, brightness adjustment, and contrast adjustment.

■ Image Acquisition System

（1）Supports color matching rate calculation and stabilizes the brightness of the photography background.

（2）Supports multi-objective management, and the scale can be automatically adapted.

■ Wear Particle Intelligent Recognition System

（1）Supports qualitative and quantitative analysis of wear: identifies abnormal wear particles for qualitative analysis; calculates global wear amount for quantitative analysis.

（2）Supports recognition of 5 types of wear, including fatigue wear, chip wear, adhesive wear, and sliding wear.

（3）Supports material recognition of 5 common particles in lubricating oil, such as steel, copper alloy, dust, oil sludge, and fiber.

（4）Supports the calculation and output of large particle coverage percentage, small particle coverage percentage, total wear value, wear severity, and wear intensity index in SH/T 0573 ferrographic analysis.

■ Reporting Function

（1）Supports the output of wear analysis reports.

（2）Features a unit management module to support monitoring, analysis, and reporting of units.

■ Convenient Data Interaction

（1）Allows data and wear particle images to be filtered and exported based on set conditions.

■ Support for Highly Customized Design

（1）Can conduct software interaction design according to customer requirements.

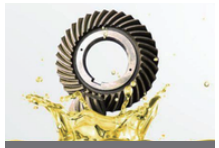
（2）Acquired images and analysis data can be custom-exported or transmitted according to customer needs.

（3）Report templates can be personalized according to customer requirements.

APPLICATION FIELD


Monitoring of machine system wear and tear


Evaluation of Lubricating Oil for Machine Systems


Gear box ferromagnetic abrasive evaluation


Residual assessment of bearing oil lamp

TECHNICAL SPECIFICATIONS

Project	Data
Design Standard	SH/T 0573 Test Method for Wear Particles in Used Lubricating Oil (Analytical Ferrography)
Computer Configuration	10th Generation Intel Core i5-10500, 8GB RAM (equivalent or higher configuration)
Camera	E3ISPM2000KPA (compatible with other models)
Transmission Cable	E301195 UL AWM style 2725 (compatible with other models)
System Software	Intelligent Abrasive Particle Analysis System
Microscope Calibration Ruler	1DIV =0.01mm
Abrasive Particle Recognition Range	0～1200um
Acquisition Type	Real-time Acquisition
Image Resolution	5480*3648 / 2736*1824
Types of Abrasive Particles Recognized	12