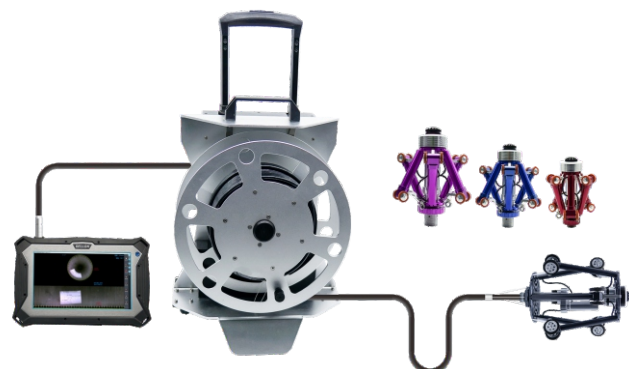


DVS700B Pipeline lumen crawling HD panoramic video detection system



Functional features

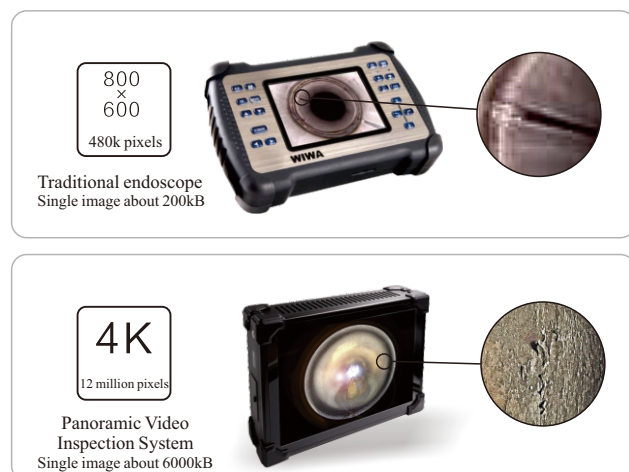
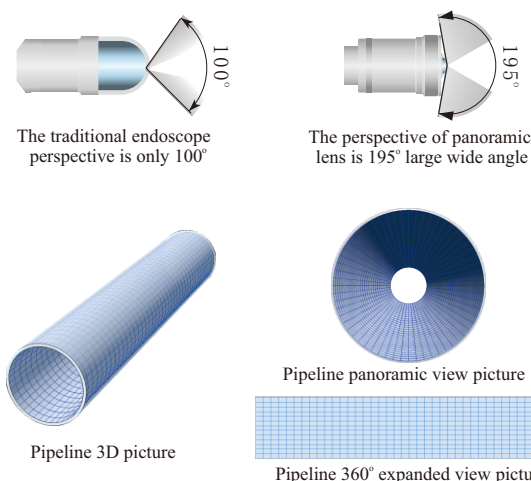
- High precision: Up to 5 to 12 million dynamic video pixels, $\pm 1^\circ$ in circumferential inclination, $\pm 3\%$ in distance accuracy, and $\pm 5\%$ in (defective) dimensional accuracy.
- High-definition imaging parallel synchronization processing: Simultaneous high-definition video imaging, video recording, expansion, remote digital transmission (picture transmission) and other functions can be simultaneously performed in the course of up to 3m/min, which greatly improves work efficiency.
- High-speed panoramic single camera adopting special optical processing, combined with multi-angle adjustable light source, ensures one-time rapid clear imaging in the whole circumference of the journey, and completely eliminates the missed detection and blind spot of the multi-lens or rotary lens.
- The professionally-designed "center-up righting mechanism" ensures the stability of the traveling and the image, and enables clear observation of the tube and the elbow.
- Can be unfolded in real time and spliced into 2D cutaways, superimposed length ruler and circumferential angle scale function.
- Axial distance and dip angle positioning function to facilitate repeated observation of suspicious areas.
- With (defect) plane size measurement function, can measure the length, width, area and other information of the delineated area.
- Featuring with real-time local zoom in, zoom out, markup, and note text (multiple color font sizes) for easy viewing of details and recording defects.
- With (crack enhancement) grayscale negatives, contrast adjustment, brightness adjustment, tone curve adjustment, monochrome channel separation, angle rotation, etc.

Brief introduction

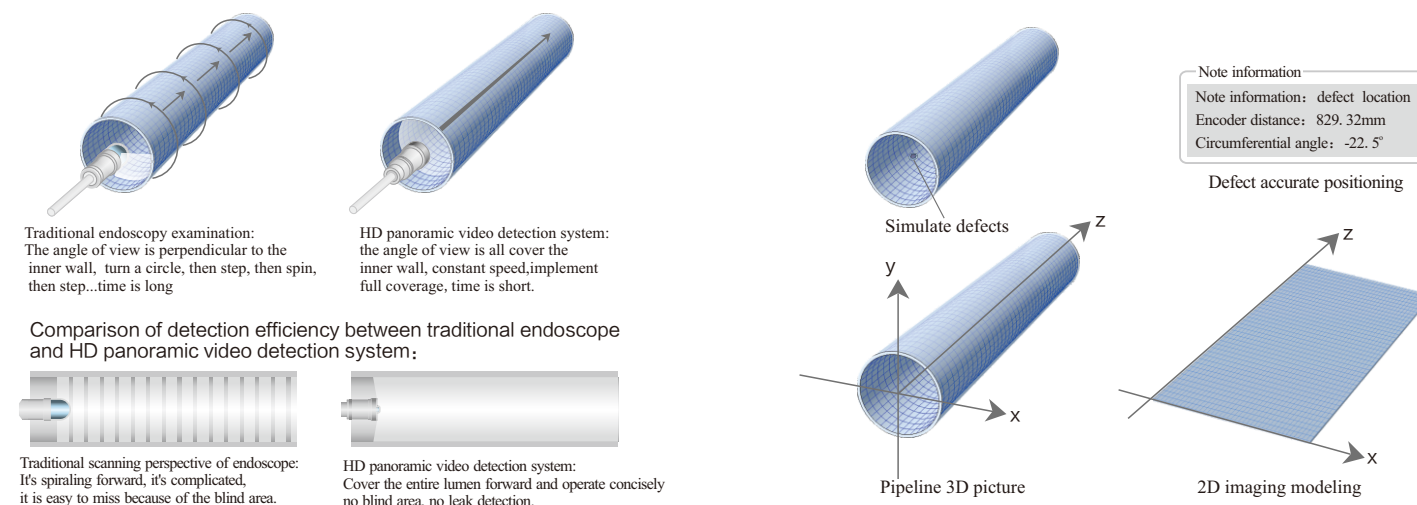
This system is based on the latest image processing research results and using advanced technology, designed for the macroscopic inspection ,such as for the inner surface of pipelines. For the inspection of pipelines, the actual requirements such as on-site operating environment and usage conditions are fully considered, and high-speed HD video, intelligent motion positioning, defect measurement editing, image expansion and splicing, and remote image transmission diagnosis (optional) are integrated and other functions. The device has the characteristics of strong anti-interference, high precision, high repeatability, good efficiency, and convenient operation. Its outstanding feature of "integration of functions, ease of operation, and remote operation" makes the inner surface macroscopically accurate. Degrees and efficiency have greatly increased.



- Portable retractable cable rack with integrated detachable, bright (visible under sunlight), high-definition large-screen display, fully taking into account the on-site operating environment and conditions of use.
- The integrated probe mechanism has the characteristics of strong anti-interference ability, moisture proof, dustproof and shockproof performance.
- The host has a built-in quad-core processor and can simultaneously acquire image data, axial travel distance, and attitude angle data of the circumferential inclination, which can ensure real-time acquisition of high-definition panoramic images, rapid and seamless deployment, and subsequent splicing into 2D cutaway diagrams.
- The host operating software has such functional modules as human-computer interaction, user management, parameter input, report generation and output/printing, data maintenance backup, operation log, and online help.
- Network enhanced version (optional): Supports Ethernet/WiFi/4G and other communication methods, using the B/S or C/S network architecture based on the TCP/IP protocol. With data (image) remote transmission, remote experts in the real-time voice / video-assisted diagnosis, centralized data archiving to the server (Server), at any time through the browser (Browser) or client (Client) to review and other enhancements.



Schematic diagram of detection of traditional endoscope and HD panoramic video detection system:



Technical parameters

- Base unit: CPU \geq i7/4GHz quad-core, high-end industrial tablet, high-definition high-definition display 10 ~ 27 inch (customizable), standard 1000G high-speed hard drive (expandable), IPX3 protection.
- Integral probe mechanism: It can be quickly disassembled and replaced. Aluminum alloy anti-corrosion technology, IP65 protection, crab type centered electric crawler, size and weight vary with models.
- Inspection length/cable rack(m): One of 15, 30, 50, 100m and customizable, size and weight vary with model.
- Suitable for straight pipe and 1.5D elbow, detection inner diameter(mm): 75~100, 100~400 (100~130, 130~180, 180~280, 280~400), 400~560mm, one or more combinations (each one overlaps about 10%).200VA
- Video images
 - Lighting Source: Highlight LED
 - Image Sensor: Color CMOS
 - Imaging perspective: 195° wide angle + 360° circumference
- Camera pixel/imaging resolution dpi: Both the static and dynamic pixels are 5 million /2592 × 1944 (detection inner diameter 50~300mm), inspection inner diameter 300~800mm) 12 million/4000 × 3000, which varies with the model.

Size Measurement

- Perimeter angle accuracy: $\pm 1^\circ$ (horizontally placed within $-90^\circ \sim 90^\circ$)
- Distance counting resolution: $\pm 1\text{mm}$
- Distance measurement accuracy: $\pm 3\%$
- Length / width / area measurement accuracy: $\pm 5\%$

Work environment

- Temperature: $-10^\circ \sim +50^\circ\text{C}$
- Humidity: $\leq 85\% \text{ R.H}$
- Power supply: Single-phase AC100~240V, 50/60Hz.
- Power consumption: $\leq 200\text{VA}$

Application scene

