Product Catalog Artificial Intelligence

Unattended substation
In order to solve the safety risks of manual inspection in special circumstances, low inspection efficiency, and improve work efficiency, find and deal with the timeliness of faults, intelligent inspection robots came into being.

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<td>Timed inspection, temporary inspection, remote control</td>
<td>Through the background system to set the daily scheduled inspection, temporary inspection to complete the task autonomously, or manually remote inspection</td>
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The main components of the intelligent inspection robot: four-drive chassis, laser sensor, intelligent platform, visible light camera, thermal imaging camera and other components.
Substation wheeled inspection robot

Design description

Thermometry, gas detector, military-grade four-wheel drive chassis, intelligent cloud platform, etc.

The most advanced thermal imaging camera non-contact self-identifying temperature measurement technology.

The latest gas detector automatically judges the SF6 gas leak point technology, and the minimum leak detection amount reaches 0.001 ml/sec.

Military-grade four-drive chassis, laser-guided autonomous cruise technology.

High-precision intelligent plathead, 360° horizontal and ±90° vertical; preset accuracy ±0.03°.
The intelligent inspection robot is used to replace the urgent, difficult, dangerous, heavy and repetitive work encountered in the manual inspection of the substation. It can load infrared power imager, gas detector, high-definition camera and other related power station equipment detection devices, and use independent and remote control methods to replace outdoor high-voltage equipment for patrol, so as to timely discover internal thermal defects of electrical equipment and external machinery. Or electrical problems such as foreign objects, damage, heat, oil leakage, etc., provide operators with relevant data to diagnose accidents and failure precursors in the operation of electrical equipment. The promotion and application of intelligent inspection robots will further improve the automation level of power production operation and provide more protection for power safety production.
Substation wheeled inspection robot

Laser guidance, trackless walking

- Using laser + gyroscope positioning technology
- No need for any track
- Full station inspection can be carried out using the original road surface
- Positioning accuracy up to 10 mm
Substation wheeled inspection robot

Multi-point autonomous cruise

The intelligent scanning of the inspection robot forms a system site map, and the task planning function is implemented according to the map in the system, and the number of the inspection stations can be edited to not less than 160,000.
According to the infrared thermal imaging principle, the robot can realize non-contact temperature measurement and display it graphically. The picture below shows the dual field of view:
Through the gas detector on the robot, it is easy to visually observe the SF6 and other gas leaks that are not recognized by the naked eye.
Through the image recognition system, the meter reading, the instrument status information and the knife gate separation position are identified.
Self-executing tasks, self-charging, long cruise time

- No need for personnel control, self-execute tasks and charge independently according to the task schedule
- Full charge with a maximum battery life of no less than 6 hours

All-weather inspection robot
Laser guided autonomous charging
Substation wheeled inspection robot

Application in the power industry

Can be used indoors and outdoors in unattended substations and other unattended power environments. Inspection work.

Outdoor inspection

Indoor inspection
1. Military four-drive chassis can run at speeds up to 3 m/s.
2. Can resist the maximum wind speed: 20 m/s (Note: 8 winds 17.2 ~ 20.7 m/s) maximum wading depth 100mm
3. The climbing ability should be no less than 15 degrees, the ability to overcome obstacles, the maximum obstacle height is 5cm
4. Charging once, can continue to work for 8 hours
5. Four-wheeled drive chassis with automatic heating system to work under low temperature, optional roller-type chassis to deal with icy road surface, etc.
6. The gimbal has an automatic heating system, and the inside of the gimbal uses low-temperature lubricating oil to prevent freezing.