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Aerial Inspection Technologies | HALCON

The HALCON system integrates different solutions for the inspection and digitalisation of overhead power lines (medium and high voltage). The capture of information is performed with the use of equipment:

- Gyro-stabilised platforms
- High resolution aerial cameras for video, photography, thermography.
- LiDAR capture equipment.

HALCON aims to verify the integrity of operational power lines through a combination of inspection techniques such as visual inspection (aerial cameras up to 150 Mpx and HD video), thermographic inspection, ultraviolet inspection, LiDAR distance measurement, 3D modelling to obtain a digital twin and aerial topography.

This service incorporates a review of existing inspection plans in order to propose new scopes and improvements, and is fully customisable.

This equipment can be used in helicopters or drones.

THE Applus+ SOLUTION

HALCON enables us to perform a quick and detailed analysis of the condition of transmission and distribution lines and their accessories. We carry out all types of individual or combined inspections aimed at meeting our customers' needs and reducing costs.

The developments implemented for data processing and analysis, as well as the use of artificial intelligence, allow us to speed up the inspection process and offer a better response to our customers. Our state-of-the-art stations allow us to analyse and record possible anomalies in record time.

The types of inspections we carry out include visual inspections, thermographic inspections, ultraviolet inspections, and remote inspections using LiDAR. In addition, the system allows the generation of a 3D model of the installations. All of this is managed by Applus+ professionals who are highly qualified and experienced to meet the most demanding market requirements.

The aerial inspection service is used to serve the main transmission and distribution companies on the Iberian Peninsula. In addition, multinational energy companies have placed their trust in us outside our borders: Romania, Italy, France, Andorra, Colombia, Australia, and Panama, are some of the countries where we have provided our services.

Applus+ has the Drone Operator in EASA ESPxxx4rwd2hcqdk Certification.

Target customers

This service is ideal for all those companies that operate and maintain high and medium voltage lines, in particular operators of electrical transmission and distribution systems; as well as evacuation, power lines for solar and wind farms, service lines for large industries, etc. In addition, companies that own susceptible linear assets will benefit from it.

It is also an optimal service for improving the preventive maintenance of assets, keeping track of them, and even identifying faults quickly with optimises the cost of maintenance.

Key customer benefits

Increased quality:

- Technological improvement
- Intelligent data processing
- More accurate distance calculation

Cost reduction:

- Simultaneous inspections
- Increased flight speed

Security:

- Highest possible flying altitude
- Greater distance to electrical hazards

Efficiency:

- Solid guarantee of results
- High quality standards

- Customised documentation

Time optimisation:

- Higher flight speed
- Higher possible flight altitude
- Reduced recaptures