

Powerline Inspections

LS MULTI COPTER

Drone Inspections



INSIDE THIS ISSUE

PG. 2

Benefits of using our Powerline Inspection Services

POWERLINE Reporting

PG. 3

Professional Engineer Comments and Deliverables.

Typical Faults Detected.

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POWERLINE INSPECTIONS WITH DRONES.

[LS MULTI COPTER PROJECTS AND SERVICES \(PTY\) LTD.](#)

LS of South Africa, doing business as LS Multi Copter is fully licensed and approved for Part 101 RPAS flights within South Africa. LS Multi Copter has been fully licensed and accredited with the SACAA (South African Civil Aviation Authority) since May 2016.

LS prides itself in doing business within the rules, regulations and limitations of our approved Operations Specifications and Approved Operations manual signed off by the SACAA.

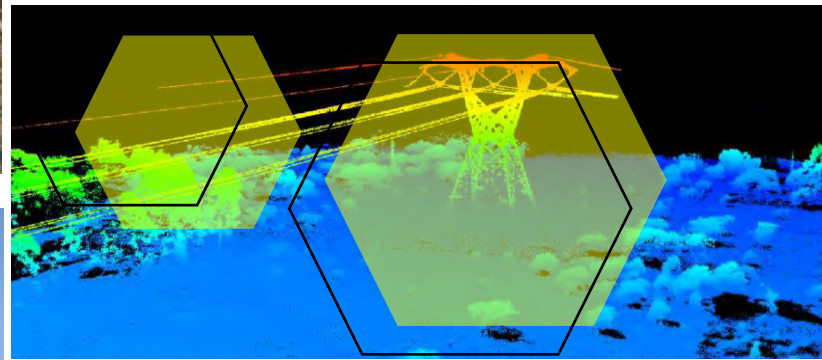
LS has done thousands of flights within the border of South Africa, also internationally in Africa, Europe, Asia, South America, and North America.

LS has several aircraft registered with the SACAA, which are all approved within our operation specifications. These aircrafts ranges from Phantom 4 aircrafts to heavy lift DJI M600 (*RTK) and the state-of-the-art M300 platforms. Typical Payload could include a 45MP RGB Camera, Lidar Camera, and Thermal Camera.



BENEFITS OF USING DRONES FOR POWERLINE INSPECTIONS:

- Reduced time and cost for Pylon Inspections
- Reduced RISK!
- High-Definition images of the complete structure, with Geo-tagged data. (Coordinates, Altitude AGL & AMSL)
- Thermal images available over the complete line.
- Lidar route & model available.
- Licensed operators = Enhanced safety for powerline inspections.
- Automated Data reporting for fast turnaround times.
- A cost-effective way to determine structural integrity.
- Pr. Eng. (Civil and Electrical) – Comments and recommendations per pylon.
- Preventative Maintenance
- Site Accessibility Reduced
- No climbing of Pylons!



POWERLINE REPORTING

A TYPICAL PYLON REPORT WOULD DELIVER AND REPORT ON THE FOLLOWING:

- Visual and Thermal Images
- Condition of Foundation
- Condition of Steelwork (Missing/Stolen Parts included)
- Condition of Stays
- Condition of Metal work (Coating)
- Condition of Phase Insulators
- Condition of Earthing
- Condition of Anti-Perching Devices
- Condition of Concrete Structures
- Condition of the Conductors
- Condition of Vibration Dampers
- Condition of Corona Rings
- Condition of Tower Labels
- Condition of Compression Joints
- Condition of Arching Horns

PROFESSIONAL ENGINEER COMMENTS:



COMPLY WITH THE REGULATIONS!

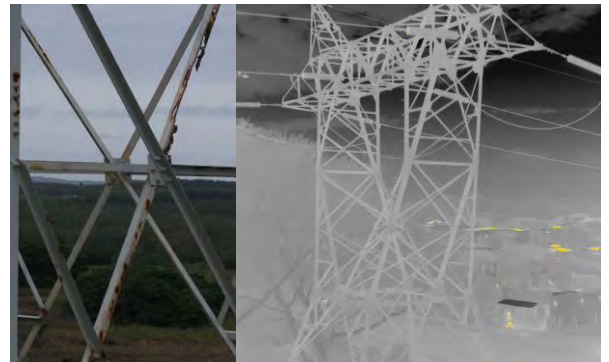
By using professional Engineers (Civil and Electrical) LS can ensure that all pylons inspected are commented on by licensed inspection authorities. These Engineers would comment on all aspects of the Tower structure, and safety concerns which may affect the structural integrity of these pylons. The Electrical Engineer would comment on all safety aspects regarding the electrical integrity of the hardware. A typical Report from the Engineer would include; Introduction per Pylon, Pylon Details, Reference Data & supporting images, Comments by the Engineer, and finally the recommendations.



TYPICAL FAULTS:

TYPICAL FAULTS DETECTED ON SITE WOULD INCLUDE:

- Missing/Stolen Tower members.
- Missing/Damaged Anti-perching devices.
- Vegetation/Soil protruding above the foundations (Enhances corrosion).
- Rust on Tower members/joints.
- Earth resistance and continuity not according to standard.
- Thermal Hotspots on the electricity line.
- Missing Tower labels/numbers.
- Missing Hardware i.e.: Corona Rings, Insulators, Arching Horns, Vibration Dampers etc.
- Foundation/Base not treated according to maintenance standards (Enhances risk of Failures).



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