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VISIOCAT© LASCAT© WIFI CAMEROV®

Patent 1256179

THICKNESS MEASUREMENT + HEIGHT MEASUREMENT «OVERHEAD CATENARY SYSTEM» + DEFLECTION

CATENARY & ELECTRIC TRACTION INSTALLATIONS INSPECTION EQUIPMENT

- Thickness measurement of contact wire (accuracy 1/10th mm)
- Height measurement of contact wire (accuracy ≤ 10 mm (LAS'CAT[©])
- Deflection : continous observation by video of the rail decline while the train or tramway is passing
- Video observation of inaccessible points
- Confort for the operator
- Electrical networks 750 V, 1500 V, tested at 30 KV, continuous or alternating
- No interruption of rail traffic



V DEVELOPPEMENT



VISUALIZATION SYSTEM BY WIFI TRANSMISSION



ADDITIONAL MODULES - CAN BE USED AT - 40°C (CANADA)



DEFLECTION Continous observation by video of the rail deflection while the train or

(Fr



Telemeter



CAMERA VISIOCAT[©]

WIFI transmission

- 2592 x 1520 pixels CMOS sensor
- 10 x Optical Zoom + Digital Remote x 4
- Vision against the light. Illumination with LEDs integrated
- Remote controlled tilt movement
- Wireless Transmission
- Automatic standby
- Autonomy : approximately 6 hours
- **Weight** : 600g
- Accessories :
 - 2 forks cable guide

SOFT-CAT INSPECTION REPORTS **GENERATOR SOFTWARE**

- Camera control (zoom, focus, site, lighting...)
- 640 x 480 pixels video clips recording
- Contact wire measurement : accuracy 1/10th mm
- Report editing wizard
- Multimedia on editing
- Files and report custom production
- Abnormalities library
- Telescopic isolated pole articulated with screw fixing TIP (M583760). Lenght 6m (certified perch) - Carrying case
- Snap-on backet console VISIOCAT[®] for tablet
- BACKPACK Compact ITV Weight 5,4 kg Weight 5,4 kg with hardware

OPTIONS

- LAS'CAT[©] Telemeter
- Distance accuracy : $\leq 2 \text{ mm}$
- Telemeter range : 60 m
- Motorized telemeter

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BRIAND







GOVERNED VISIOCAT®

- Tablet (Option)
- Touchscreen
- **Optional GPS**
- Automatic standby
- Autonomy : approximately 6 hours

APPLICATIONS AREAS OF LAS'CAT®

•	Measurement of X dimension (pulleys and coun- terweights
•	Checking supports measurement
•	Measurement of parts situated on catenary (bracket, arm return)
•	Measures side face of posts
•	Height and lenght of the line bracket
•	Length of tubing
•	Catenary congestion
 Isolation distance under bridges, tunnels 	
•	Catenary gauge in section
•	Height difference in switches

Distance of spacing between post face to face...

Important : See list of 39 applications enumerated by the rail operators





WHY USE CAMÉROV[®] VISIOCAT[©] ?

(PATENT N° 1256179)

• Thickness measurement of the contact wire (accuracy 0,10mm)	 Views wall-mounted devices (tunnels, public highways, facades)
Detection and identification of wear points	Records measurement photographically for later eva- luation
 Checks conditions of the various component parts of the catenary 	Checks pulleys and counterweights
Checking of cable wear, small cable pendulums,	Checks of flatness condition of the contact wire
 Connections etc Creation of a database and asset tracking 	Tracks and supervises work performed by subcontrac- tors or third parties
Control of isolators	Checks serial numbers on faulty parts
Checking fins of isolators, identifying cracks, distortions	Checks of isolation on insulated cable sheath
 etc. See priming traces, heating traces 	 Checks status of annealing by variation of colours on the hard copper
Facilitating maintenance : Thickness measurement of insulator guide pads, thickness measurement of wire Thickness status after automatic report for lifting of doubt Control of pantographs condition and roof condition without access platform	Checks status of thickness in common areas
	 Checks dynamic behaviour of pantographs at real speeds
	Checks wear strips on pantographs
	Checking of high load without access platform
Investigates causes of incidents on the roof of the rolling stock	Checking pantographs conditions
 Observation of pantographs at entry of station (Avoids Operation Restriction Request for camera gantry) 	Checks for oil leaks on very high voltage transformers without power interruption



ADDITIONNAL APPLICATION WITH LAS'CAT MODULE

Height measurement of contact wire (accuracy < 10 mm)

- Measurement of X dimension (pulleys and counterweights)
- Measures side face of posts
- Isolation distances under bridge, tunnel

- Height difference in switches
- Deflection : Continuous observation by video of the rail decline while the train is passing
- Checking supports
- Measurement of parts situated on catenary (bracket, return arm etc.)
- Height and length of line bracket...
- Catenary gauge in sections
- _ _ _ _ _ _ _ _ _ _ _ _
- Distance of spacing between posts face to face
- **Tubing length**

X SIDE OF PULLEYS

Pulley spacing measurements













Observation of pulleys for gripping measuring





Positionnement du module de déflexion

SECTEURS

- Trolley Bus
- Tramways

PRECISION DES MESURES

- Height < à 2 cm
- Night measurements





Indications of the contact wire in relation to the track

ROV

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