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# VISIOCAT<sup>®</sup> LAS'CAT<sup>®</sup>

## CAMEROV<sup>®</sup>

Patent 1256179

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

### CATENARY & ELECTRIC TRACTION INSTALLATIONS INSPECTION EQUIPMENT

- Thickness measurement of contact wire (accuracy 1/10<sup>th</sup> mm)
- Height measurement of contact wire (accuracy ≤ 10 mm (LAS'CAT<sup>®</sup>))
- 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



Approval  
N° DPI 15035

1<sup>st</sup> Price Sifer  
Winner of Innovation awards  
Infrastructure



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

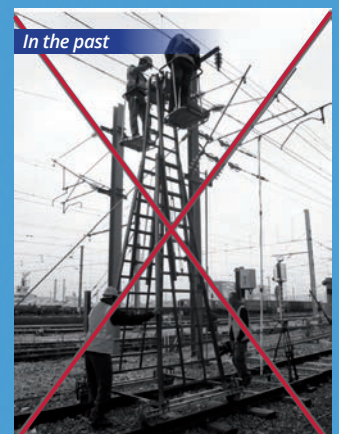
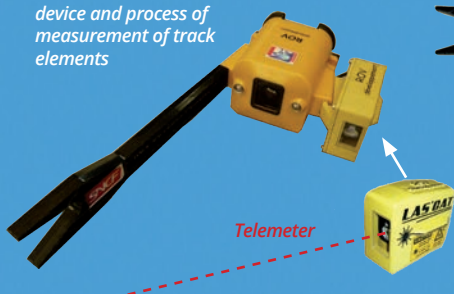
#### VISIOCAT<sup>®</sup> LAS'CAT<sup>®</sup> CAMEROV<sup>®</sup>

LAS'CAT<sup>®</sup> measurement device and process of measurement of track elements

#### HEIGHT MEASUREMENT OF OVERHEAD CATENARY SYSTEM (OCS)

#### DEFLECTION

Continous observation by video of the rail deflection while the train or tramway is passing



## CAMERA VISIOCAT®

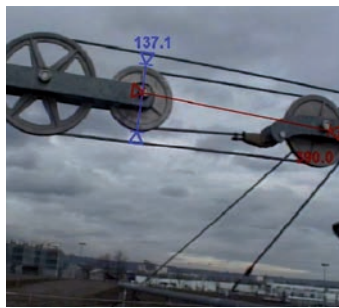
- 768 x 576 pixels HR PAL CCD sensor
- 10 x Optical Zoom + Digital Remote x 4
- Vision against the light. Illumination with LEDs integrated
- Remote controlled tilt movement
- **Wireless Transmission**
- Automatic standby
- **Autonomy** : approximately 6 hours
- **Weight** : 600g
- **Accessories** :
  - 2 forks cable guide
  - 2 guides insulators pads

## SOFT-CAT INSPECTION REPORTS GENERATOR SOFTWARE

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

## OPTIONS

- **LAS'CAT® Telemeter**
- Distance accuracy :  $\leq 2$  mm
- Telemeter range : 60 m
- Motorized telemeter



## GOVERNED VISIOCAT®

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

## APPLICATIONS AREAS OF LAS'CAT®

- Measurement of X dimension (pulleys and counterweights)
- Checking supports measurement
- Measurement of parts situated on catenary (bracket, arm return)
- Measures side face of posts
- Height and length 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



BACKPACK «Compact» ITV  
Weight : 5,4 kg



# WHY USE CAMÉROV® VISIOCAT® ?

(PATENT N° 1256179)

- **Thickness measurement of the contact wire** (accuracy 0,10mm)
- **Detection and identification of wear points**
- Checks conditions of the various component parts of the catenary
- Checking of cable wear, small cable pendulums, connections etc...
- Creation of a database and asset tracking
- Control of isolators
- Checking fins of isolators, identifying cracks, distortions etc.
- See priming traces, heating traces
- 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
- Investigates causes of incidents on the roof of the rolling stock
- Observation of pantographs at entry of station (Avoids Operation Restriction Request for camera gantry)
- Views wall-mounted devices (tunnels, public highways, facades...)
- Records measurement photographically for later evaluation
- Checks pulleys and counterweights
- Checks of flatness condition of the contact wire
- Tracks and supervises work performed by subcontractors or third parties
- Checks serial numbers on faulty parts
- Checks of isolation on insulated cable sheath
- Checks status of annealing by variation of colours on the hard copper
- 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
- Checking pantographs conditions
- Checks for oil leaks on very high voltage transformers without power interruption





# ADDITIONNAL APPLICATIONS 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



Deflection Module



Contact wire Height measurement on test bench

