



S.E.V.E.R.I.N.E

a way to follow deformed surfaces on large scales objects

Purpose

- Simultaneously measure a displacement in several directions in real time
- Replace the wire sensor techniques
- Reduce the instrumentation implementation time
- Supply results in real time

Realised by Holo3 for EADS SPACE TRANSPORTATION



View of a tank in testing preparation phase

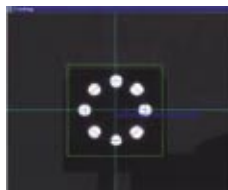
Principle

Based on the principle of optical tracking, a target with LEDs on a calibration circle and a center LED serving as a measurement point is observed.

Each target / camera set takes a measurement in two directions.



Measurement point



Calibration circle

Implementation

The targets are fixed on the tank's structure. Each is observed by a camera. A special image processing software running on a PC simultaneously controls up to six cameras. The entire measurement process is driven by a supervisory PC on which the measurement configurations are managed and the measurement results transmitted in real time.

Advantages / Interests

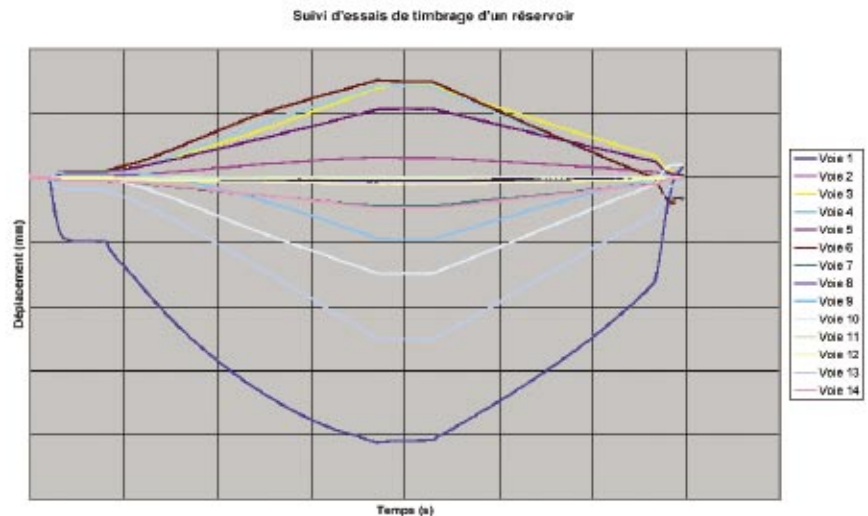
- Use of low-cost compact cameras
- Rapid implementation
- Automatic data reduction
- Reduced labor costs
- Easy to use

Other applications

- Testing of any type of tank
- Checking of large scale structures de formations
- Building, civil engineering
- Test follow-up

Technical data

- Measurement frequency : 10 Hz
- Resolution : 0.1 mm
- Field of observation : > 100 mm
- Real-time display of 4 points in 2 directions
- Simultaneous measurement with 20 or more cameras
- Typical test cycling period : 30 minutes



Holo3

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