



## FEASIBILITY STUDY

# UNIAXIAL TENSILE TEST OF THIN HYPER-ELASTIC ROPES & STRINGS

## APPLICATION SPECIFICATION

A uniaxial tensile test of a hyper-elastic latex rope was used to demonstrate the joined-camera feature of the stereo-camera system.

In this particular setup, each camera had a different resolution. During the initial stage of the test, a higher resolution camera (9 Mpx) was used for greater precision. A standard camera (5 Mpx) served as extension of the field of view to determine the total elongation of the tested hyper-elastic materials.



Tensile test set-up shown during the calibration process

### KEYWORDS

- Hyper-elastic specimen
- Extremely thin specimen
- Calibration
- Dual-camera system
- Joined camera mode
- Tensile test

### TEST SETUP

- Custom measuring system
- Alpha DIC SW modules: Axial Strain (A)
- Measuring tools:
  - Line probe
  - Extreme Line probe
- Latex specimen

### OUTPUT

- Demonstration of tracking extremely thin specimen
- Dual-resolution features

- Robust algorithms for large deformations
- Real-time and post-process measurements
- Custom experiments designed by our experts

- Easy-to-use & intuitive UI
- Extremely precise and accurate measurements
- Compatible with practically any UTM

### WHY CHOOSE X-SIGHT?

# MEASUREMENT PROCESS AND TOOLS

