**Instron® Corporation**
825 University Ave ■ Norwood, MA 02062-2643
Tel: +1-800-473-7838 ■ Fax: +1-781-575-5144 ■ www.instron.com

# Cord Strapping Test

By The Instron Applications Team

## Summary

Tensile, buckle and recovery tests were run on Avistrap PW100 cord stapping. Two 1¼ inch wide samples were tested for tensile and buckle tensile properties. One sample was tested for recovery properties.

## Description of Tests

The tensile and buckle tests were run with a crosshead speed of 2 in/min. The buckle tests required the use of a AVB10A buckle to attach two sections of the strap.

The recovery test consisted of a loading ramp to 1,000 lb at 2 in/min, an unloading ramp to 10 lb at 5 in/min and a hold at 10 lb for 5 minutes. Set and recovery were reported. Set is the strain value at the end of the test. Recovery is equal to the following formula:

R(%) = (maximum strain - set strain)/minimum strain

Strain was measured in the tensile test using a non-contacting video extensometer. Gauge marks were placed on the material using a black felt pen. The marks were drawn across the entire width of the materiel at a separation of approximately 4 in. The extensometer automatically measured the gauge length before starting the test. The material was preloaded to 10 lb before the extensometer was initialized. Precise strain measurement was not required in the buckle test.

## Conclusions

These tests were successfully able to evaluate the tensile, buckle and recovery tests and would be recommended for future testing. The webbing capstan grips are advantageous for testing high strength strapping without slippage or premature failure.

## Apparatus

- Model 5560 with 50 kN load cell
- Video extensometer with 200 mm Field of View (FOV)
- Tensile and TestProfiler software
- 10,000 lb webbing capstan grips