

UNIAXIAL TENSILE TESTING

SHIMADZU AGS-X SERIES (100 kN)

Tensile testing is a destructive test process that provides information about the tensile strength, yield strength and ductility of a material. RCPTM performs tension test or tensile test methods in accordance with industry specifications. The tensile test or tension test involves applying an ever-increasing load to a test sample up to the point of failure. The process creates a stress/strain curve showing how the material reacts throughout the tensile test. The test sample is securely held by top and bottom grips attached to the tensile or universal testing machine. During the tension test, the grips are moved apart at a constant rate to stretch the specimen. The force on the specimen and its displacement are continuously monitored and plotted on a stress-strain curve until failure.

ACQUIRED INFORMATION

- > Tensile strength, also known as ultimate tensile strength (UTS)
- > Yield strength
- > Ductility or elongation
- > Reduction of area after the fracture of the test sample (Poisson's ratio)

SAMPLE TYPES

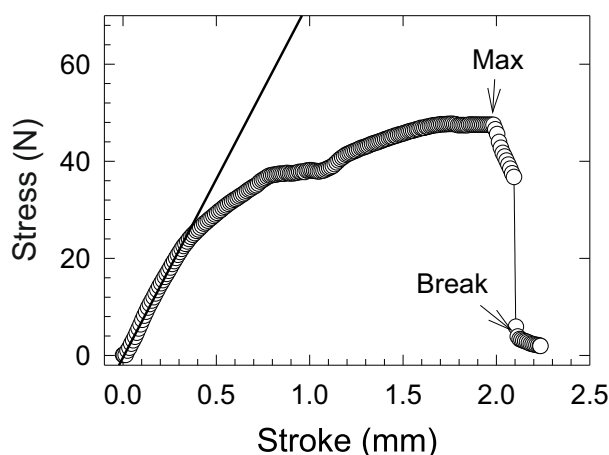
- > Solid foils, plates, or fibres
- > Materials types such as composites, iron, steel, plastics, resins, and ceramics to food and biological samples

MODES, CONDITIONS AND PRECISION

- > Uniaxial tensile testing
- > Non-contact digital video extensometer
- > Compression testing
- > Bending testing
- > Texture and cycling testing
- > Temperature range of -70 to +280 °C
- > Crosshead speed range of 0.001 to 800 mm/min (step less)
- > Force measurements accuracy conforms to EN 10002-2 Grade 1, ISO 7500-1 Class 1, BS 1610 Class 1, and ASTM E4, JIS B7721 Class 1



Autograph AGS-X Series (100 kN)



DETAILED INFORMATION ON REQUEST



REGIONAL CENTRE
OF ADVANCED TECHNOLOGIES
AND MATERIALS

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