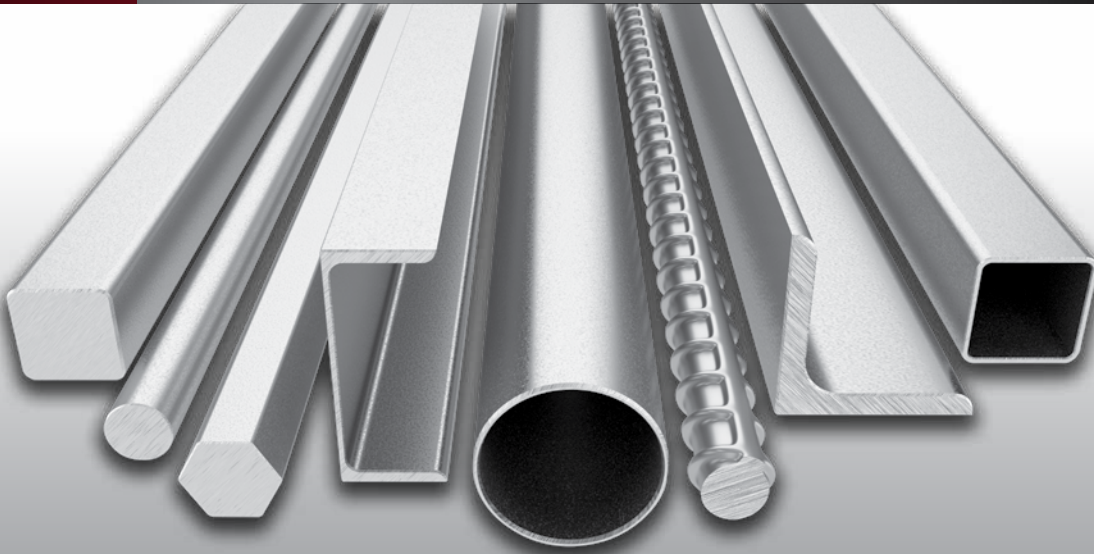




Metals Testing Solutions



MTS' testing solutions are engineered to meet the uptime demands for Quality Control testing and the required flexibility of advanced Research & Development labs.



Universal



Multi-Axial



High Rate



Fatigue & Fracture

Grips & Fixtures

Static Test Methods

Tensile at Ambient Temperatures



ISO 6362-2, ISO 6363-2, ISO 6892-1, ASTM A53, ASTM A370, ASTM E8, GB/T 228.1

Tensile at Elevated Temperatures



ISO (EN) 6892-2, ASTM A451 (Reference to ASTM A370), ASTM E21, GB/T 228.2

Tensile Sheet Metal Plastic Strain Ratio & Strain Hardening Exponent



ISO 10113, ASTM E517, GB/T 5027 & ISO 10275, ASTM E646, GB/T 5028

Compression at Ambient & Non-Ambient Temperatures



ASTM E9, ASTM E209, GB/T 7314

Bend at Ambient & Non-Ambient Temperatures



ISO 7438, ASTM A370, ASTM E190, ASTM E290, ASTM E885

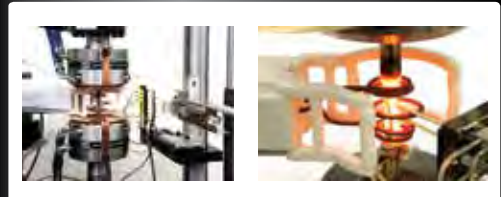
Fatigue & Fracture Test Methods

Fatigue



Strain-controlled (LCF) - ISO 12106, ASTM E606, GB/T 26077
Force-controlled (HCF) - ISO 1099, ASTM 466, GB/T 3075

Thermomechanical Fatigue (TMF)



ISO 12111, ASTM E2368

Fracture Toughness (FT) & Fatigue Crack Growth (FCG)



C (T) specimens SE (B) specimens M (T) specimens

FT - ISO 12135, ASTM B645, ASTM E399, ASTM E1304, ASTM E1820
FCG - ISO 12108, ASTM E647, prEN 3873, EN 4524, GB/T 6398

Fasteners

Tensile - Nuts & Bolts



ISO 898-1, ISO 898-2, ISO 3506-2, ISO 8839, ASTM A370, ASTM F606,
GB/T 3098.1, GB/T 3098.2, GB/T 3098.10, GB/T 3098.15

Dynamic Test Methods

High Strain Rate



ISO 26203-2, GB/T 30069.2, GB/T 37783

Metals materials testing labs routinely need to test per international or tailored manufacturing standards, but they also need to be able to run tests that have never been performed before.

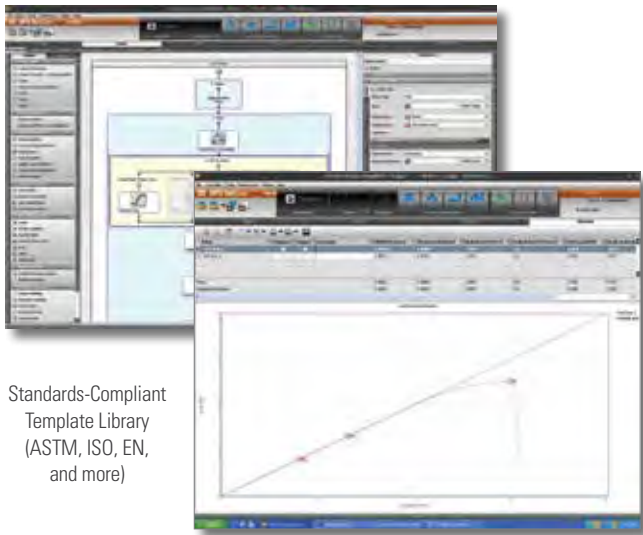
MTS supports a full range of static and dynamic mechanical test methods under a variety of environmental conditions for metal materials and products, including bars, round wires, tubes, sheets, plates, fasteners, welds and adhesives.

Environmental Simulation Systems



Alignment Solutions

MTS TestSuite™ Application Software



Standards-Compliant
Template Library
(ASTM, ISO, EN,
and more)

Learn More

Contact MTS and explore how versatile, high-performance MTS test system can enhance the accuracy and efficiency of your research and development or manufacturing quality testing programs.

- » Universal, Electrodynamic & Servohydraulic Test Systems
- » Versatile FlexTest® Digital Controllers
- » Easy-to-use MTS TestSuite Software
- » Fatigue-rated Force Transducers
- » Durable Grips & Fixtures
- » Precision Extensometers/Strain Measurement
- » Accurate & Reliable Environmental Simulation
- » Critical Load Frame Alignment Tools
- » Unmatched MTS Service & Support

Strain & Crack Measurement



Clip-on Axial & Cross-sectional Extensometers for Tension, Compression & Fatigue Testing



High-Temperature Axial Extensometers for Tension, Compression & Fatigue Testing



COD Clip Gage & DCPD for Fracture Mechanics Testing



Automatic Extensometer for Tension & Compression Testing



Non-contacting Optical & Video Extensometer for Tension, Compression & Fatigue Testing

Common Mechanical Metals Testing Standards

General Test Standards

STATIC & DYNAMIC		STANDARD
Tensile	Ambient Temperature	ISO 6892-1, ASTM A48, ASTM A370, ASTM B557, ASTM E8, ASTM E111, ASTM E345, prEN 2002-1, GB/T 228.1
	Elevated Temperature	ISO 6892-2, ASTM E21, prEN 2002-2, GB/T 228.2
	Low Temperature	ISO 6892-3, ISO 6892-4, GB/T 228.3, GB/T 228.4
	High Strain Rate	ISO 26203-2, GB/T 30069.2, GB/T 37783
Tensile Sheet Metal	Plastic Strain Ratio	ISO 10113, ASTM E517, GB/T 5027
	Strain Hardening Exp.	ISO 10275, ASTM E646, GB/T 5028
	Biaxial	ISO 16842, GB/T 36024
Compression		ASTM E9, ASTM E111, ASTM E290, GB/T 7314
Bend		ISO 7438, ASTM 370, ASTM E290, ASTM E885, EN 485-2
Shear		ASTM E143, ASTM B831
Torsion		ISO 18338

FATIGUE		STANDARD
Fatigue	Strain-controlled (LCF)	ISO 12106, ASTM E606, GB/T 26077
	Force-controlled (HCF)	ISO 1099, ASTM 466, GB/T 3075
	Thermomechanical Fatigue (TMF)	ISO 12111, ASTM E2368
	Variable Amplitude	ISO 12110-1, GB/T 37306.1
	Torque	ISO 1352
Fracture Toughness	K, J, R-Curve, J-R-Curve, or Crack Tip Opening Displacement (CTOD)	ISO 12135, ASTM E1820
	Plain Strain K_{Ic} or K_{Jc}	ASTM B909
	Linear-Elastic Plain-Strain K_{Ic}	ASTM B645, ASTM B646, ASTM E399
	Reference Temperature (<i>Elastic Plastic K_{Jc}</i>)	ASTM E1921
	K_{R} -Curve	ASTM B646, ASTM E561
Fatigue Crack Growth		ISO 12108, ASTM E647, prEN 3873, ASD-STAN prEN 4524, GB/T 6398

Mechanical Fasteners

Standards

Tensile	ISO 898-1, ISO 898-2, ISO 3506-2, ISO 8839, ISO 14589, ASTM 370, ASTM F606, EN 20898-2, GB/T 3098.1, GB/T 3098.2, GB/T 3098.10, GB/T 3098.15, GB/T 3098.18, GB/T 3098.22
Compression	ISO 898-2, ASTM F606, GB/T 3098.2
Shear	ISO 14589, ASTM B565, GB/T 3098.18
Torsion	ISO 898-1, ISO 898-7, ISO 2320, ISO 8839, GB/T 3098.9, GB/T 3098.10, GB/T 3098.22
Fatigue	ISO 3800

Welds

Standards

Tensile	ISO 4136, ISO 5178, ISO 9018, GB/T 2651, GB/T 26957
Bend	ISO 5173, ASTM E190
Fracture Toughness	ISO 15653, ASTM E2818



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