

Material Properties Testing Machines

Characterizing tensile, compression, and fatigue properties of critical components

Oceaneering is equipped with the expertise and equipment required to complete thermo-mechanical testing of materials at our in-house laboratories located in Rosyth, Scotland and Niteroi, Brazil.

We can complete tests including:

- » Axial tension and compression
- » High cycle axial fatigue
- » Low cycle axial fatigue
- » SN curve generation
- » Three- and four-point bending
- » Fracture mechanics
- » Compression tests



FEATURES

Up to ± 500 kN axial force

Temperatures -50° to 100° C

Test frequency up to 80 Hz

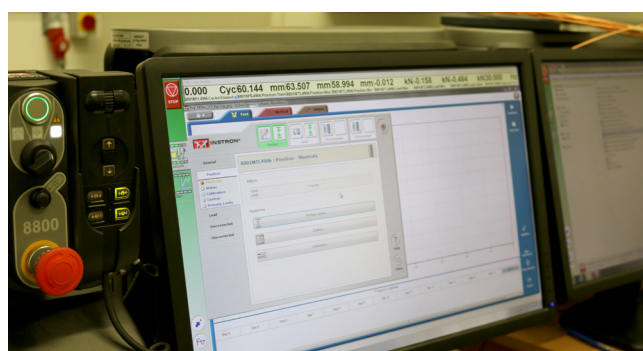
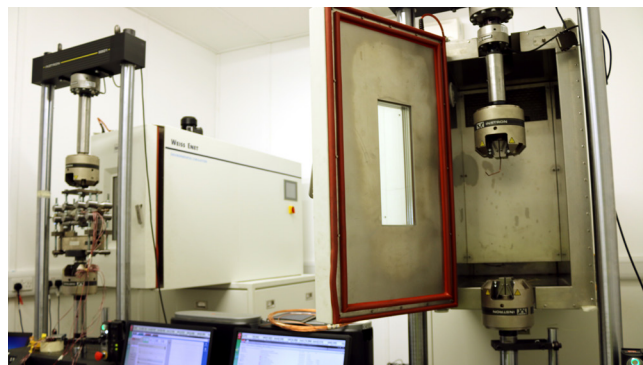
Material Properties Testing Machines

Oceaneering testing laboratories are home to a range of modern Instron® and Lloyd® test machines capable of testing items including:

- » Polymers and metals
- » Drawn components such as copper conductors and steel wires
- » Extruded components
- » Finished components such as electrical cables, fiber optic cables, hoses, and tubes

The benefits of completing thermo-mechanical material testing include:

- » Ability to predict service life
- » Validation and improvement of analysis models
- » Advancement of overall knowledge understanding of products



	Rosyth, Scotland	Niteroi, Brazil
Test load range	± 5 kN and ± 500 kN via interchangeable load cells	Up to ± 100 kN via interchangeable load cells
Maximum bending moment	5 kNm	5 kNm
Test frequency	80 Hz	30 Hz
Maximum sample size (length)	40 in / 1,000 mm (approximately)	40 in / 1,000 mm (approximately)
Maximum actuator stroke	5 in / 150 mm	5 in / 150 mm
Temperature range	-72.4° to 212°F / -50° to 100°C	± 77° F / ± 25°C
Sensors	Integrated displacement and load monitoring. Datalogging facilities available for monitoring of additional sensors such as thermocouples and strain gauges, if required.	
Calibration	UKAS Accredited calibration to BS EN ISO 7500-1: 2004	Balinorte Brazil
Sample number required	1, multi-fatigue (in series) on request	1
Results	Electronic test report	
Test equipment	Instron® 8801 (extended frames) Instron® 8803 (extended frames) Lloyds® Easy Test EZ50	Instron® 8801 (extended frames)

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