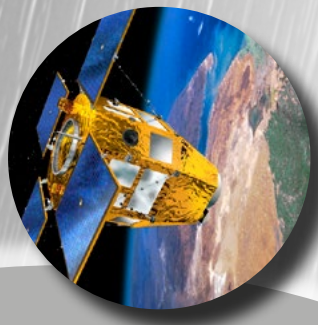
Recherches & Réalisations Rémy

Very High Cycle Fatigue Testing Machines

Creep Testing Machines

Universal Testing Machines



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Very High Cycle Fatigue (VHCF)

Fully reversed Fatigue Tests

MEG 20

The MEG 20 is a Very High Cycle Fatigue (VHCF) testing machine designed for fully reversed tests (load ratio R=-1). It allows mechanical characterization of materials up to 10^9 or 10^{10} cycles in gigacycle regime.

The MEG 20 machine is comprising of a testing frame and a separate control cabinet called “Grey Box”.

The testing frame can be placed on a table. It has a built-in ultrasonic generator, which allows the specimen to be placed under fatigue stress at a frequency of 20kHz.

One billion cycles is reached in 14 hours only, reducing the necessary time to get Wöhler's curve. And of course the occupation time of the machine, improving drastically the Return On Investment (ROI) !

The Grey Box contains the control and acquisition equipment. The interface is made via dedicated software application.

<u>Technical specifications and performances:</u>

- Table machine
- Load ratio: R=-1 (fully reversed tests)
- Loading frequency: 20kHz
- Amplitude of excitation: 3µm up to 160µm
- Control and acquisition with dedicated software
- Automatic stop when specimen breaks
- Fatigue tests in economically viable time: 109 cycles in less than 14 hours
- Installation within 15min on conventional systems
- No maintenance
- Specimen dimensioning tool without finite element calculations

Fluctuating Tensile Tests

MEG 20 TT

The MEG 20 TT is a Very High Cycle Fatigue (VHCF) testing machine designed for fully reversed (load ratio R=-1) and tensile-tensile tests (0<R<1). It allows mechanical characterization of materials in gigacycle regime.

The MEG 20 TT machine is comprising of a testing frame and a separate control cabinet called “Grey Box”.

The testing frame can be placed on a table, or on a sturdy welded-construction pedestal. It has a built-in ultrasonic generator, which allows the specimen to be loaded at a frequency of 20kHz.

One billion cycles is reached in 14 hours only, reducing the necessary time to get Wöhler's curve. And of course the occupation time of the machine, improving drastically the return on investment (ROI)!

<u>Technical specifications and performances:</u>

- Load ratio: R=-1 (fully reversed tests)
- Load ratio: 0<R<1 (tensile-tensile tests)
- Loading frequency: 20kHz
- Amplitude of excitation: 3µm up to 160µm
- Control and acquisition with dedicated software
- Automatic stop when specimen breaks
- Fatigue tests in economically viable time: 10^9 cycles in less than 14 hours
- Installation within 15min on conventional systems
- No maintenance
- Specimen dimensioning tool without finite element calculations

<u>Other 3R VHCF tests expertise:</u>

- Torsion tests
- 3 & 4-point bending tests
- Fatigue crack propagation tests under mode I loading
- Disc bending tests
- Tests in aqueous environments
- Temperature-controlled tests

<u>3R support:</u>

- Training on ultrasonic VHCF
- Technical support
- Pre-study on request

Universal Testing Machine

Syntech

ORIGINE FRANCE GARANTIE®

CERIB 13 0002

Creep Testing Machine

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