



DE MATTIA FATIGUE CHECK - A.I. CAMERA

**INSTRUMENT FOR FATIGUE RESISTANCE TESTS
IN BENDING AND IN TENSION AT CONTROLLED
TEMPERATURE (-40 ÷ + 200°C) WITH AUTOMATIC
INSPECTION OF THE SPECIMENS THROUGH VIDEO
CAMERAS**

**STANDARDS: ASTM D813; ASTM D430-B; ISO 132; ISO 6943; JIS
K_6260;**



Instrument for temperature-controlled fatigue testing with recording of specimen images by high-speed video cameras, analysis and identification of the crack by artificial intelligence.

Technical characteristics

- You can set the frequency of the deformation cycle (between 60 and 300 rpm), the stroke (between 0 and 60 mm), the distance between the clamps (max 100 mm), the number of cycles before the stop (max 1.000 .000)
- 12-position specimen holder
- Movement system with both sample holders

moving in opposite directions to ensure low noise and vibration levels

- CE marking

Environmental Chamber

- settable temperature between -40 and + 200 °C
- cooling of the climatic chamber by means of a refrigeration unit integrated in the instrument

Registration of the images of the samples

- N ° 6 high resolution video cameras record the images of the bending area of the 12 samples with a settable frequency
- Image recording is synchronized with deformation

and is performed during instrument operation
The **15" touch screen display with dedicated software** allows:

- Electronic recording of images of each of the 12 samples
- Storage of images for each sample with a frequency defined by the customer
- Image analysis with AI algorithm for automatic detection of the crack start
- Presentation of the sequence of recorded images
- Download via usb of the recorded images.

Speed adjustment: from 60 to 300 Cycles/min - 1 to 5 Hz

Run adjustment: Between 0 and 60 mm

Set of the number of cycles before automatic stop: Between 1 and 10⁹

Distance of the grips: Maximum 100 mm

Sample holder: 12 samples can be tested at the same time

Test temperature (with refrigeration unit): From -40°C to 200°C (1°C resolu-

tion).

Control display and Software: Touch-screen Display 15"

Video cameras for image acquisition: 6 BW video cameras with resolution 600x450 pixels. Each camera captures the image of 2 samples

Lighting system: Led lighting system. Ignition synchronized with oscillation

Noise level: < 50 dB

