Combined traction and torsion fatigue test bench

MAIN FUNCTIONS

This testing machine allows to estimate the fatigue life of components and/or finished products. Fatigue tests characterize the ability of a material or product to withstand cyclical loading in order to best reproduce the operating conditions of the part. This bench makes it possible to apply to the tested product combined tensile and torsion tests up to its fatigue failure, in particular for testing the mechanical resistance of electric cables.

APPLICATIONS

ELECTRIC CABLES
Verification of the electrical continuity of cables subjected to traction/torsion

WEBBING
Test of the tensile strength of webbing.

HOSES
Verification of the integrity of a hose subjected to traction/torsion cycles.

ADVANTAGES

- Robust fixation
- Sliding support
- Continuity test
- Operator safety

OPERATING PROCEDURE

The sample to be tested is fixed on one side to a rotary-driven concentric chuck and at its other end is attached to a chuck actuated in translation. At each end of the cable tested, double chucks ensure the clamping of the outer sheath on one chuck and the inside of the cable on the other chuck.

The machine can perform combined traction and torsional cycles with the force, torque, position or angle servo-control.

TECHNICAL CHARACTERISTICS

- Max. traction force: 7,000 N
- Max. torque (in both directions): 700 Nm
- Max. cable diameter: 60 mm
- Max. rotation speed: 120 °/s

OPTIONS

- 8-way electrical continuity check for electric cable testing
- Automatic test reports (evolution of torques, force and deformation analysis)

TESTS ACCORDING TO STANDARDS:

EN 50182 EN 50540 IEC 61089 IEC 62219 ISO 1352