

# Flex Fatigue Test Machine

Full-scale fatigue testing system for critical products

Oceaneering is equipped with the expertise and equipment to complete full-scale fatigue testing at our in-house laboratories located in Rosyth, Scotland and Niteroi, Brazil.

The flex fatigue rig is suitable for completing tensile or combined tension and bending fatigue tests on a wide range of products and their associated connection hardware.



## FEATURES

**Maximum sample length 82 ft / 25 m**

**Tensile load maximum 2,500 kN**

**Angular variation up to  $\pm 30$  degrees**

# Flex Fatigue Testing Machine

Full-scale fatigue testing system for critical products

**Our machinery can perform tensile or combined tension and bending fatigue testing on products including:**

- » Umbilicals
- » Bend stiffeners
- » Latching mechanisms
- » Flexible and composite pipes
- » Power cables
- » Ropes

**Advantages of completing flex fatigue testing:**

- » Ability to validate service life prediction
- » Advancement of overall knowledge and understanding of products
- » Verification of compliance with industry standards

|                                 | Rosyth, Scotland   | Niteroi, Brazil  |
|---------------------------------|--|--|
| Applied Loads                   | Tension, bending, internal pressure (independently controlled)   | Tension, bending, internal pressure (independently controlled)   |
| Maximum tensile load            | 1,000 kN   | 2,500 kN   |
| Axial displacement range        | 40 in / 1000 mm  | 20 in / 500 mm   |
| Angular displacement range      | ± 30° in 180° phase  | ± 15° in 180° phase  |
| Maximum sample length           | 82 ft / 25 m   | 37,37 ft / 11,39 m   |
| Maximum sample diameter         | 24 in / 600 mm   | 20 in / 500 mm   |
| Machine / Test Sample Interface | Bolted flange  | Bolted flange  |
| Control system                  | Computerized system for machine control and datalogging of sample instrumentation  | Computerized system for machine control and datalogging of sample instrumentation  |
| Sensors                         | Integrated displacement and load monitoring. Datalogging facilities available for monitoring of additional sensors such as thermocouples and strain gauges, if required. | 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   | Accredited calibration (Brazil)  |
| Results                         | Electronic test report   | Electronic test report   |