

INDEPENDENT TESTING SERVICES

Custom Testing to your Specifications

SERVICE DESCRIPTION

PMI works with you to ensure survivability of your cable system at sea. PMI is capable and willing to take on new challenges to simulate service conditions experienced by underwater cable systems and devices. Our specialty is to provide insight with respect to the interaction between the strength member and attached hardware, or the complete cable assembly.

Our fully equipped facility and trained associates can offer customized testing services uniquely tailored to your needs.

FEATURES AND BENEFITS

- Evaluation, qualification, design verification, and acceptance test programs
- Continuous monitoring of power and signal conductors and optical fibers throughout testing
- Certification and qualification to meet government, commercial, institutional, and international standards
- Testing in accordance with customer requirements and industry standards
- Confidential results and on-site record retention
- ISO 9001:2015 with Design Certification



CBOS (cyclic bend over sheave) machine



Long span tension setup



One of PMI's hydrostatic pressure chambers



100-kip straight tension machine

TESTING SERVICES

Typical at-sea conditions can cause catastrophic failures to your system. Our facility can assist you to identify potential problems prior to use by performing extensive laboratory testing.

TENSION

Break Strength
 Test Load vs. Elongation Data
 Proof Load Certification
 Dynamic Load Simulation
 Fatigue & Retirement Criteria
 Cable Design Verification/Qualification
 Certification of Cable Assemblies
 Pre-Tensioning of Cable Prior to Terminating

MEASUREMENT AND ANALYSIS

Tension vs. Torque
 Tension vs. Rotation
 Torque-Balance Verification
 Cable Qualification
 Verify "Non-Rotating"
 Test for Twist Resistance
 Torque-Restraint Testing Verification
 Monitoring & Measurement of Conductor and/or Optical Fiber Performance

BENDING

Static & Dynamic Cable Qualification
 Simulate Handling System Problems
 Qualify Cable Fairing & Hardware
 Verify Wet / Dry Fatigue Performance
 Cable Jacket Abrasion Tests Simulate
 Tow Point Dynamics Fatigue Testing
 Design Qualification

HYDROSTATIC PRESSURE

Simulate At-Depth Pressure Loading
 Verify Seal and Electrical and Optical Performance

TEST EQUIPMENT & CAPABILITY

TENSION	Up to 19.8 m (65 ft.), tension up to 445 kN (100,000 lbf.). Proof, tension and breaking strength.
CYCLIC TENSION	Up to 19.8 m (65 ft.), tension up to 445 kN (100,000 lbf.)
SERVO-CONTROLLED TENSION	Programmable rate of load or displacement using ramp, sine, saw tooth, or recorded waveforms. Up to 19.8 m (65 ft.), tension up to 445 kN (100,000 lbf.) at a rate of 305 cm (120 in.)/minute (max).
LONG SPAN TENSION SETUP	Up to 518m (1700 ft.) over multiple sheaves, tension up to 44.5 kN (10,000 lbf.).
HYDROSTATIC PRESSURE	10342 kPa to 68948 kPa (1,500-psi to 10,000-psi)
CYCLIC BEND OVER SHEAVE	Multi-sheave test frame, tension up to 267 kN (60,000 lbf.)
CYCLIC TENSION OVER SHEAVE	Multi-sheave test frame, tension up to 267 kN (60,000 lbf.)
CYCLIC FLEXURE	Repeated bends to ± 27°, tension up to 89 kN (20,000 lbf.)
REVERSE BEND OVER SHEAVES	Tension up to 445 kN (100,000 lbf.)
TORQUE & ROTATION	In-line torque cells for Torque vs. Tension data. Torque up to 1017 Nm (750 ft-lbs), rotation to ± 1080°, tension up to 44.5 kN (10,000 lbf.).
INDUCED TORQUE / ROTATION	Controlled rotation of tensioned specimen while measuring in-line torque & twist. Torque up to 750 ft-lbs, rotation to ± 1080°, tension up to 44.5 kN (10,000 lbf.).
ELECTRICAL	High-voltage breakdown, insulation resistance, impedance, DC resistance, capacitance, attenuation, cross-talk, TDR, current capacity, etc.
OPTICAL	Loss measurements of fiber-optic cable elements using power meters, laser, OTDR, splicers & field-installable connectors.

TECHNICAL SUPPORT

If you have questions or concerns about any PMI product, please contact our engineering staff directly.
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