



Our Products Include:

- Load Cells
 - Custom
 - High Capacity
 - Multiaxes
 - Underwater

- Torque Sensors
 - Custom Torque
 - OEM
 - High Capacity
 - Underwater

Calibration Kits

Our In-House and Field Services Include:

- In-House Services
- Sensor Design
 - Calibration and Gaging Services

- Field Services
- Measurement of torque and horsepower in rotating equipment
 - Stress/Strain Measurements of Plant Components
 - Measurements in Harsh Environments
 - MOV and AOV Strain Gage Instrumentation
 - Measurement of Thrust and Torque on Valves and Rotating Equipment
 - Structural Integrity Tests (SITs)
 - Permanent and Temporary Monitoring Systems
 - Design and Manufacture of Custom Sensors

Our measurement services are used to quantify operating parameters, aid with diagnostics and preventive maintenance, and troubleshoot causes for equipment failure.

Sensing Systems specializes in conducting measurements and manufacturing sensors to operate in harsh environments such as:

- High Temperature
- Low / Cryogenic Temperature
- Underwater / High Humidity
- High Magnetic Fields
- Chemical / Corrosive

Sensing Systems has been associated with the marine industry since its inception. We provide products and services specifically designed to meet the measuring needs of the commercial marine and oil industries.

Sensing Systems manufactures load and torque sensors. We combine our considerable design capabilities with our experience in harsh environments to address the measurement needs of the marine and oil industry. We are the main supplier of underwater/submersible sensors for the major offshore exploration and oceanographic institutions around the world. Our sensors are used to measure:

- Rigging loads
- Towing loads
- Hull stress and deflection
- Fish Cage Loads
- Torque and Horsepower in Engines, Motors, Pumps and Waterjets
- Anchoring loads
- Winch torque
- Mooring Loads
- Sheave Loads

Our sensors are fully submersible and operate in a wide range of challenging environments. They are used by research vessels, tankers, ferries, offshore platforms, fishing vessels and pleasure craft.

We also provide services to obtain Torque and Horsepower Measurements in the drivetrains of marine vessels and perform vibration surveys to detect and diagnose operating problems. Please our Services page for the full range of available measurement services.

Sensors for Commercial Vessels

Sensing Systems manufactures marine sensors to address the full spectrum of measurement requirements found in commercial vessels. We also install temporary or permanent systems to monitor operating equipment. The following are a few examples:

Towing Loads:

We design and manufacture force sensors to measure towing loads between tugs and barges with capacities of up to 3,000,000 lbs.

HullStress:

We instrument ship's hulls and install monitoring systems to measure hull stresses during operation. Accelerometers and tiltmeters are used in conjunction with strain gages to monitor strain, pitch, roll and yaw. These measurements become a powerful troubleshooting and analysis tool to diagnose structural issues.

CONTACT US FOR YOUR CUSTOM APPLICATIONS

We will analyze the requirements of your application and provide a recommendation.

Tel: 508-992-0872 or 800-849-4016

Go to our website: www.sensing-systems.com
info@sensing-systems.com

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P.O. BOX 50180 NEW BEDFORD, MA 02745

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Winch Torque:

We manufacture torque sensors for research and fishing vessels to monitor winch torque loads during fishing operations.

Engine Torque and Horsepower:

Sensing Systems installs permanent or temporary monitoring systems to measure engine torque and horsepower output to propellers or waterjets.

Anchoring Loads:

We design and manufacture load cells specifically designed for monitoring anchoring loads on floating or semisubmersible platforms.

Sensors for Sailing Vessels

Sailing vessels convert wind energy into movement. This energy transfer requires sails, hull and rigging working together to accomplish the task. The efficiency of this process depends on the configuration and adjustment of its components. Our sensors provide measurements that can be used to properly adjust the vessel's rigging configuration.

Sensing Systems has been awarded US Patent No. 6,543,296 for Turnbuckle Sensors. These sensors are used to accurately measure loads in shrouds and backstays in sailboats standing rigging. In addition, tangs, backstay adjusters, chain plates, rod rigging and just about any rigging component can be instrumented to measure loads. Masts can be instrumented to measure the compressive load applied by rigging components as they are adjusted to ensure accurate and repeatable settings.

Benefits derived from measuring rigging loads include:

- Increased Sailing Efficiency
- Repeatability of Rigging Configuration
- Avoid Static and Dynamic Overload Conditions
- Longer Life for Rigging Hardware, Hull and Sails

All our sensors may be incorporated into existing electronics or may be supplied with their own signal conditioning and display units.

Capacity & Traceability

Sensor capacities vary from 1 lb to 3,000,000 lbs depending on the application. Higher capacities are available without NIST traceability. All sensors are calibrated in the laboratory using NIST traceable standards and calibration documentation/certificates are provided with each unit.

Configurations

The design of Sensing Systems marine sensors allows them to be incorporated into any shape or configuration. The outside geometry may be machined to square, rectangular, circular or any other section or shape required by the application. Sensing Systems' approach is to incorporate our standard sensing elements into a shape that fits the customer's application. This allows us to deliver marine sensors matched to the customer's application within a short period of time. The sensing elements in our marine sensors include design features to properly encapsulate and waterproof the electronics from the harsh environment.

Applications

Marine sensors are used in a wide variety of applications. Examples of applications include monitoring mooring loads for research buoys, monitoring hull stresses on oil tankers and determining hydrodynamic loads in underwater cages used for fish farming.

Our marine sensors find use in the following industries:

- Oil and Gas Drilling, Exploration and Production
- Commercial and Farm Fishing
- Marine Transportation
- Marine Research and Environmental Studies
- Underwater Construction
- Medical Device Manufacturing
- Marine
- Sailing Vessels

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