Fabrication of Fiber Optic Sensor Coil

In this paper, a full parameter mathematical model of temperature error of optical fiber coil is established. The new model can be used to optimize the physical.

In the thesis, the effects of various perturbations like temperature, vibration and magnetic field on the sensor coil are analysed, which degrades the gyro performance.

The core of the open-loop fiber optic gyroscope (FOG) is the fiber optic sensing assembly. It comprises fiber optic sensing coil, phase modulator, two fiber optic couplers, fiber crystal polarizer, light-emitting ...

In this paper, the temperature transient error model was built based on discrete mathematics model of SHUPE error in the Fiber optic gyroscope and the element physical model of the fiber coil.

Experiments show that the system can achieve automatic speed changing, automatic reversing, constant small tension control and precise fiber arrangement. The new designed system ...

An experimental system based on the spatially non-reciprocal phase modulator is built to realize the fiber optic gyroscope (I-FOG) of a 5 m length fiber coil, and the experimental results are in ...

A coil may be produced by winding the fiber on some frame made of aluminum or plastic, for example, or without such a part (frameless, freestanding) when the coil is mechanically stabilized with some ...

Characterization of both the static and dynamic parameters of fiber coils ensures defect-free and consistent manufacturing for reliable fiber-optic gyroscope (FOG) devices.

The present invention relates to fiber optic gyroscopes and more particularly pertains to a potting compound for use and fabrication of the fiber optic sensor coil of a gyroscope and method of making ...

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