# NASA High-Temperature Fiber Optic Sensor

This paper reviews the sensing principle, structural design, and temperature measurement performance of fiber-optic high-temperature sensors, as well as recent significant progress in the transition of ...

Armstrong researchers are using NASA"s patented Fiber Optic Sensing System (FOSS) to develop an optical fiber network to monitor the structural health of a spacecraft"s thermal protection ...

Fiber optic sensors are defined as devices that utilize optical fibers to measure a variety of stimuli, including mechanical, thermal, electromagnetic, radiation, chemical, and flow characteristics. They ...

The proposed technology will provide for NASA a distributed and embedded in situ system for measurement of thermal protection system (TPS) temperature, strain, heat flux, and ...

A High Temperature Fiber Optic Sensor (HTFOS) has been developed at NASA Glenn Research Center for aircraft engine applications. After fabrication and preliminary in-house performance evaluation, the ...

""Fiber optics real time monitoring of test results against analytical predictions was essential in the success of the full-scale test program." "In areas of high strain gradients these techniques were ...

The index of refraction of fiber changes under high temperatures, which could change the numerical aperture of the fiber and ruin or weaken the FBG structural integrity and signal strength.

The tests conducted at NASA"s Glenn Research Center in Cleveland used Fiber Optic Sensing System (FOSS) developed by NASA"s Armstrong Flight Research Center, in Edwards, California, to measure ...

A fiber-optic sensor is a sensor that uses optical fiber either as the sensing element ("intrinsic sensors"), or as a means of relaying signals from a remote sensor to the electronics that process the signals ...

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