Fiber optic fuselage

Within the framework program "Large Passenger Aircraft" (LPA), Fraunhofer IWS used a CO2 laser beam source to demonstrate the welding of long joining seams on large-volume ...

As the aviation industry strives to reduce weight, enhance data transmission speeds, and improve electromagnetic resilience, fiber optics is emerging as a groundbreaking alternative to traditional ...

This article examines the impending generational shift in connection technology toward fiber optic systems and the new solutions offered by the market. On December 17, 1903, a pioneer ...

We conducted structural monitoring of the mid-sized jet aircraft during flights using the OFDR-FBG that was the fiber optic distributed sensing system. We measured the fuselage stringer ...

To investigate a variety of nondestructive inspection technologies and assess impact damage characteristics in carbon fiber aircraft structure, the FAA Airworthiness Assurance Center, ...

Our highly-skilled team of professionals specialize in the installation, termination, splicing, and testing of fiber optics technology in virtually every possible ...

The laser-induced guided waves generated by pulsed beam scanning in the wings and fuselage of an aircraft are captured by a fiber optic, piezoelectric, or laser ultrasonic sensor, and their ...

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Fiber-optic sensors act primarily as strain sensors, so unless damage happens to be close to the sensor location, the changes in the strain data may be very slight and damage may go undetected.

As part of this effort, additional fiber-optic harnesses, provided by Sikorsky Aircraft and Lockheed Corporation, and optical splices, provided by Aurora Optics, were installed on the aircraft. To date, ...

To achieve this, the JetZero BWB is leveraging the lightweight strength of carbon fiber -reinforced composites in its fuselage and wings to reduce weight and improve efficiency.

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