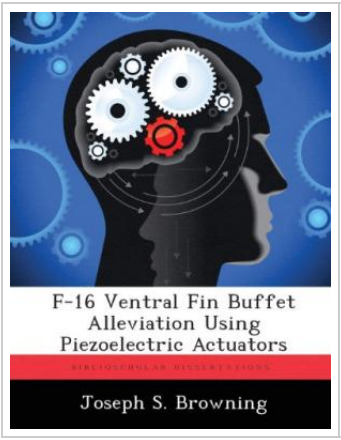

F-16 Ventral Fin Buffet Alleviation Using Piezoelectric Actuators (Paperback)

By Joseph S Browning

Biblioscholar, United States, 2012. Paperback. Condition: New. Language: English . Brand New Book ***** Print on Demand *****.Buffet-induced vibrations can have a disastrous impact on aircraft structures. Early attempts at combating buffet vibrations included passive methods such as structural enhancements and leading edge fences. Active methods have shown greater promise, including active airflow control, control surface modulation, and active structural control using piezoelectric actuators. Surface mounted piezoelectric actuators impart directional strain reducing the negative effects associated with harmful vibration. The Block-15 F-16 ventral fin represents an aircraft structure prone to failure when subjected to the buffet field from the wake of a LANTIRN pod. This research takes advantage of the susceptibility to buffet vibration of the Block 15 ventral fin in an effort to design an active control system to alleviate vibrations using piezoelectric actuators and sensors and to demonstrate its capability during flight test. It was sponsored by the United States Air Force (USAF) Test Pilot School (TPS).

Reviews

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