Structural Analysis for the American Airlines Flight 587 Accident Investigation: Global Analysis

By Richard D. Young

BiblioGov. Paperback. Book Condition: New. This item is printed on demand. Paperback. 26 pages. Dimensions: 9.7in. x 7.4in. x 0.1in.NASA Langley Research Center (LaRC) supported the National Transportation Safety Board (NTSB) in the American Airlines Flight 587 accident investigation due to LaRCs expertise in high-fidelity structural analysis and testing of composite structures and materials. A Global Analysis Team from LaRC reviewed the manufacturer s design and certification procedures, developed finite element models and conducted structural analyses, and participated jointly with the NTSB and Airbus in subcomponent tests conducted at Airbus in Hamburg, Germany. The Global Analysis Team identified no significant or obvious deficiencies in the Airbus certification and design methods. Analysis results from the LaRC team indicated that the most-likely failure scenario was failure initiation at the right rear main attachment fitting (lug), followed by an unstable progression of failure of all fin-to-fuselage attachments and separation of the VTP from the aircraft. Additionally, analysis results indicated that failure initiates at the final observed maximum fin loading condition in the accident, when the VTP was subjected to loads that were at minimum 1. 92 times the design limit load condition for certification. For certification, the VTP is only required to support...

READ ONLINE
[7.56 MB]

Reviews

DMCA Notice | Terms