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Title : Estimation of Horizontal Tail loads of MiG-21 Aircraft

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Abstract :

In the maneuvering flight of an aircraft, horizontal tail experiences heavy loads which is a factor of the fatigue life of the aircraft. This report contains the estimated values of the horizontal tail loads of MiG-21BIS aircraft for different flight conditions. These results are used to generate the tail load spectrum for the full scale fatigue testing of aircraft at NAL. The method used is based on a simple procedure which uses the load factor time history and the time to reach peak normal acceleration as design parameters in the estimation of horizontal tail loads.