Testing of Aerospace Structures

CSIR-NAL

Full-scale airframe testing

Extending the service life of aircraft structures

Aircraft in service are constantly subjected to fluctuating loads of varying severity, leading to airframe fatigue NAL's well-planned full-scale fatigue test facility provides inputs that can lead to a substantial increase in the structural life of airframes. Static testing of airframe components to the ultimate design load is also undertaken.

A test rig has been specially designed for static testing of airframe components at suitable locations till the ultimate design load is reached.

Static test of the SARAS wing

Test set-up of the SARAS fuselage

Several innovative schemes were evolved for the structural testing of the SARAS aircraft.

The full-scale fatigue test facility subjects airframes to a load environment history that closely simulates the actual service experi

MiG-21 airframe testing

Ground Vibration Testing

Ground Vibration Tests(GVT) to characterize vehicle dynamics

Computer Controlled Vibration Test Facility