



RNS Institute of Technology

Department of Mechanical Engineering

Design and Analysis of Nose Landing Gear Element of an Aircraft

The landing gear system of an aircraft is a system which absorbs the energy from the impact of landing. Numerical type simulation has become highly invaluable tool for the assessment of the landing gear type dynamics also as well as of aircraft landing structure gear interaction. Review of a simple landing-gear structure model system which accurately simulates with the energy system absorbed by the gear without adding substantial structure and complexity with the model. It carries the structure aircraft weight at all require ground operations, including, landing, take off, taxing, and towing. In future we know that advances in computational type speed have made aircraft and high spacecraft crash simulations design using an explicit, transient type dynamic, finite element analysis (FEM) code are the more feasible. For a plane crash model type system the landing gear is also exact response is approximated work with a many strong spring where many different force applied to the different fuselage. And it is also computed in a user written works type. Helicopter crash type simulations which is using this approach that are compared with different necessary data is also acquired with the experimental method and data from a full structure crash structure test can be achieved by with the use of an aircraft of a composite. Depends on type of landing gear systems is also presented. Specifically, a nonlinear type model can easily developed which is simulated, and against static and dynamic data test data. Many type model includes nonlinear structure effects such as a velocity type squared related high damping, poly tropic gas law, stick-slip friction, a geometry governed with the high model structure for the high discharge type coefficients and methods, effects a nonlinear spring and damping model structure.