Design and analysis of leaf spring

Abstract:

A leaf spring is a simple form of spring commonly used for the suspension in vehicles. Originally called a laminated or carriage spring, and sometimes referred to as a semi-elliptical spring or cart spring, it is one of the oldest forms of springing, dating back to medieval times.

Leaf springs are commonly used in vehicle suspension system and are subjected to millions of varying stress cycles leading to fatigue failure. The main objective is to compare the stress loads of different materials for stiffness, high strength to weight ratio and good corrosion resistance.

Cad model of leaf spring is generated in solid works premium 2014 and perform the analysis to carries out maximum stress developed in leaf springs and perform the analysis in solid works simulation tool.