Applications of Finite Element Method with its Usage in Modern Technology

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Abstract: *The finite elements method (FEM) is a numerical technique for solving problems which are described by partial differential equations and can be formulated as functional minimizations. Here we studied some applications of finite elements methods in various forms along with the study of classical method and numerical method. The finite element analysis is a numerical technique in which all the complexities of the problems, like varying shape, boundary conditions and loads are maintained as they are but the solutions obtained are approximate. The rapid enhancements in computer hardware technology and lowering of the cost of computers have boosted this method because a computer is the basic need for the application of this method. A number of popular brand of finite element analysis packages are now available commercially. Some of the popular packages are STAAD-PRO, GT-STRUDEL, NASTRAN, NISA and ANSYS. One can analyze several complex structures using these packages*

Keywords: Finite Element Method, Partial Differential Equations, Basis Functions, Mathematical Modeling, Numerical Formulations