

ABSTRACT

Frame structures are a very common or perhaps the most common type of building. As the name suggests, this type of building consists of a frame or a skeleton of concrete. The main advantage of frames over normal traditional structure is due to their load bearing structures. Frames are typically seen in warehouses, barns and other places where large, open spaces are required. Generally, frames are analyzed for static, modal, transient and so on analysis. In our present project, we are analyzing overhang frame with uniform distribution load for static analysis. Inputs given for the structure are material properties i.e. young's modulus, poisson's ratio, element types with loads and boundary conditions. With the help of the ANSYS tool, which uses finite elements analysis model to simulate engineering problems, we analyzed the frame structures in 1D, 2D and 3D model for calculating deflections and comparing the results for its quality, requirement and importance of each element type.

Keywords: Frames, deflection, load bearing, finite element analysis, ANSYS