ABSTRACT

India has a large population residing all over country and the electricity supply need of this population creates requirement of a large transmission and distribution system. Design and analysis of transmission tower is carried out keeping in view to supply optimum utilization of electric supply with increasing population in the locality, in India. Transmission line is an integrated system consisting of conductor subsystem, ground wire subsystem, and one sub system for each category of support structure. They are designed and constructed in wide variety of shapes, types, sizes, configurations and materials.

An analysis is carried out for the tower and the performance of the tower and the member forces in all the vertical, horizontal and diagonal members are evaluated. The critical elements `are identified. Stress calculations in the structure are normally obtained from a linear elastic analysis where members are assumed to be axially loaded. Using ANSYS the Linear static analysis of transmission tower has been carried out as a one-dimensional structure. The details of Load calculations, Modeling and Analysis are discussed.

Keywords: Transmission tower, Axial loads, Analysis, Modeling, 1D-Element, ANSYS.