

# Optimization and Analysis of Modular Cantilever Using Finite Element Approach

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## Abstract

Overhead cantilevers systems are used to support the assembly of overhead power transmission wires i.e. catenary wire, contact wire and the droppers to transfer the overall bending, transverse and vertical load to mast via insulators. The key characteristic of a quintessential cantilever system are light weight, modular and robust enough to support the overhead transmission lines in railways. In this work, modular cantilever system is optimized using COMSOL Multiphysics® wherein each functionality of each component is assessed, analyzed. The new design so obtained is having lesser number of components with reduced installation and fabrication steps.