ABSTRACT

Chimneys are required to carry vertically and discharge, gaseous products of combustion, chemical waste gases, and exhaust air from a industry to the atmosphere. Having an adequate Chimney for your fire place plays a vital role in the success of good burning fire. Static, modal, thermal and nonlinear are various types of analysis should be performed to check the strength and stability of chimney structure. Use of numerical method played a major role in analysing a structure in the current technology. Among which finite element method using ANSYS software is vastly used tool.

In the present study, modelling of chimney and thermal analysis is carried using simulation tool with 2D element. Young's modulus, poison's ratio, thermal conductivities are the inputs to be given to analyse the structure. Variation of temperature along the thickness of chimney are reported from inside to outside.

Key words: young's modulus, thermal analysis, poison's ratio, FEM, chimney