**Coupled Field Analysis Of A Chimney Used In Cement Industry**

**Abstract**

Chimney, which form the last component of a system using a flue gas such as boiler, play a vital role in maintaining efficiency, draft, etc, of a system and also in minimizing the atmospheric pollution. Steel chimneys are also known as steel stacks. The steel chimneys are made of steel plates and supported on foundation. The steel chimneys are used to escape and disperse the flue gases to such a height that the gases do not contaminate surrounding. In this thesis, chimney will be designed considering dead load and wind load. The Bureau of Indian Standards (BIS) design codes procedures will be used for the design of the chimney. The chimney was considered as a cantilever beam with annular cross section. 3D model of the chimney is done in Pro/Engineer and coupled field analysis is done on the chimney in ANSYS. A simplified model of chimneys with various thicknesses like 10mm, 12mm, 14mm and 16mm were modeled atmosphere.