

- a) **M. B. Eteiba, M. M. Abdel Aziz, and J. H. Shazly, “Thermal Model for Compressed Gas Insulated Power Transformers”, The 9th International Middle East Power Systems Conference, MEBCON 2003 , Egypt, PP 611-616, December 2003.**

A mathematical thermal model of Sulphur hexafluoride (SF₆) gas cooled type gas insulated power transformer has been formulated, programmed for computer solution, and verified. In this model all significant parameters that influence transformer operation have been included. The thermal model can predict the real-time transformer temperatures for any variation in electrical loading and for any ambient thermal environment. Results predicted by the simulation include the average real-time temperatures of the core and coil assembly, SF₆ insulated gas, transformer tank, and the contributions of convection and radiation to the total heat transfer rate.