

Computer-Aided Teaching of Transformers for Undergraduates

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Abstract : In the era of technological advancement, use of computer technology has become inevitable. Hence it has become the need of the hour to integrate software methods in engineering curriculum as a part to boost pedagogy techniques. Simulations software is a great help to graduates of disciplines such as electrical engineering. Since electrical engineering deals with high voltages and heavy instruments, extra care must be taken while operating with them. The viable solution would be to have appropriate control. The appropriate control could be well designed if engineers have knowledge of kind of waveforms associated with the system. Though these waveforms can be plotted manually, but it consumes a lot of time. Hence aid of simulation helps to understand steady state of system and resulting in better performance. In this paper computer, aided teaching of transformer is carried out using MATLAB/Simulink. The test carried out on a transformer includes open circuit test and short circuit respectively. The respective parameters of transformer are then calculated using the values obtained from open circuit and short circuit test respectively using Simulink.

Keywords : computer aided teaching, open circuit test, short circuit test, simulink, transformer

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