DETERMINATION AND ANALYSIS OF HARMONIC CONTENTS IN A THREE-PHASE INSTALLATION

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ABSTRACT

Harmonics generation can lead to serious power quality problem if it is not reduced to acceptable level. Electric components content of non-linear loads contribute to serious harmonics injection to the main supply line. This project is proposed to analyse a harmonic distortion that produced by non-linear loads.

This project summarizes a study of harmonic distortion for non-linear devices. The study of analysis held on Power System Laboratory at Level 6, UiTM Shah Alam. Large number of computers and fluorescent lamps were involved.

The main objective and focus for this project is to measure total harmonic distortion of equipments. Therefore, in the purpose to find harmonic components, Psim Version 6 and Fluke RPM were used. The circuit diagram for the fluorescent lamp and computer were design and simulate in the Psim. From the Psim, the values of harmonic distortion at odd harmonic integers obtained. After that the Total Harmonic Distortion (THD) is calculated by using the formula. By using Fluke RPM, the changes in harmonic distortion and their values of harmonic integer can tracked easily.

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