

ABSTRACT

The following report deals with Power System Harmonics and voltage fluctuations. A study was carried at a small industrial estate at O'Meara to determine if voltage and current harmonics were present at several of the factories. From this study the major harmonics present were found to be the fifth, seventh and eleventh. A three phase radial load flow program was written to determine the voltage profile of the system, to consider the effects of power factor capacitor addition and to perform studies at harmonic frequencies to see if the distribution feeder was susceptible to resonance at any of the harmonics present. The study found that as the feeder exists presently the likelihood of resonance was small. However, if power factor correction capacitors were added to a few of the factories, the system tended to resonate at the eleventh harmonic. (vii) CARTEL

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