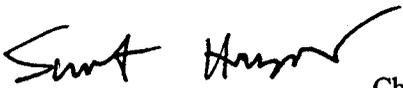
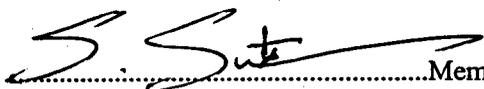


THESIS TITLE : REDUCTION OF VOLTAGE FLICKERING INFLUENCED BY ARC  
WELDER

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#### ABSTRACT

This thesis presents a method of reducing the voltage flickering influenced by an electric arc welder of rating 6.6 KVA. The intensity of light, caused by voltage flickering in the range of below 30 Hz. frequency, is very sensitive to human's eyes. The fast varying reactive power of the welder, the source of voltage flickering is monitored by an active, fast response instantaneous reactive power measuring circuit. The technique of this measurement is the products of an instantaneous voltage and its reactive current component, representing the real-time reactive power flow. A thyristor controlled reactor with fixed capacitor type of static var compensation of rated 8 KVAR. was designed to produce reactive power required by the welder. Harmonic filters were also designed to filter out harmonic currents caused by the thyristor control reactor. The whole system was built and tested and found that voltage flickering can be reduced by 58 %. Other advantages of compensation are: to improve power factor, minimize voltage drop and reduce the loss of system.