

ABSTRACT

Tube lamp is an electronic item commonly used for home lighting, office, etc. Because TL lamps are more power efficient than incandescent lamps. However, many LHE lamps are found that surpass the standard harmonic current levels as defined by the IEC 6100-3-2 C class[1]. High levels of harmonics can affect other electronic goods connected to the same power grid (PLN).

To reduce emission level of harmonic current, this final project is designed and implemented harmonic filter on TL lamp system. TL lamps used as research objects derived from products sold on the market.

Filters are designed to work at 50 Hz frequency and are expected to reduce harmonics levels at 2nd, 3rd, 5th, 7th, 9th, 11th, 13th and 15th of harmonics before filter installation. From filter design obtained then made value of capacitance and inductance formula in design of harmonic filter to get result of filter damping optimization.

Keywords: *Tube Lamp, Harmonic Current, Power Filter, Current filter*