

## **ABSTRACT**

Electronic developments currently quite rapidly, for example electronic equipment for household, office and industrial. Generally, this equipment requires a power supply voltage direct current source, while the available power supply is an alternating current voltage source. Therefore, it takes a rectifier that functions convert alternating current voltage source. However, the use of rectifier equipment, produces distortion in the current waveform, which is known as harmonics that can interfere with other electrical equipment working, which is attached to the same voltage source.

Rectifier circuit full-wave three-phase uncontrolled causing large harmonics. Many methods can be done to reduce the harmonics generated by the rectifier. One way is with the installation of a passive filter using tuned filters to reduce harmonic spectrum. The method will be applied at a frequency of 250Hz and 350Hz because in this frequency has the most dominant harmonic in the three-phase full wave rectifier.

The results of the testing tool obtained are close to the expected results. On the use of three-phase rectifier load THDi decreased from 28,45% to 16,69% and THDv decreased from 11,05% to 7,65%.

Keywords: harmonic, three-phase rectifier, passive filters