Abstract

This final project is working on AC to DC Full Converter Uncontrolled Three Phase with low harmonic filter design. Where at first before the passive filters is installed into AC to DC Full Converter Uncontrolled Three Phase, it produced the 3rd harmonic frequency with a small enough value, and the 5th harmonic frequency and 7th with significant value that must be eliminated. This is like as theory that for the six pulse converter, the harmonics will appear in numbered with the formula $6n\pm1$. Of course it will appear the frequency 5th, 7th, 11th. However, the high value of harmonic frequency are the 5th, then the 7th, while the frequency of the 3rd and the 11 small (within the allowable tolerance limits). So the passive filter is designed to eliminate the 5th and 7th frequency, then this circuit loaded dc motor 100 volt dc.

From the test we get data that the 5th frequency previously have value 19.41% then decrease in value 7.98% and the 7th frequency previously have value 0.78% then decrease to be 0.08%. So the THD reduced about 7.5%.

Keywords: harmonics 5 and 7, the passive filter, THD