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## Abstract

Power Electronic Cycloconverter circuits use in different application for example, ship propulsion and cement mill. These applications require adjustable speed to do their job. Changing number of pole of motor is quite difficult. So, Cycloconverter circuit play important role to adjustable speed higher or lower than synchronous speed. In this paper, single phase mid-point Cycloconverter will be investigated. MOSFET, IGBT and GTO will be used as power devices in Cycloconverter circuit. Harmonics and total harmonics distortion (THD) for Cycloconverter circuit will be compared between these power devices. Pulse width modulation technique PWM will be used as gate drive for all power devices. MATLAB software will be used in this project.

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## Index Terms

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## Keywords

Cycloconverter , MOSFET , IGBT, GTO, Harmonics and THD