103. PERFORMANCE ENHANCEMENT OF SINGLE PHASE MATRIX CONVERTER USING AMALGAMATION METHODS

E. Muthukumaran M.E (PH.D) A.V. Dhiviyapriyal B.E(M.E)
Department of Electricals and Electronics Engineering Department of Electricals and Electronics Engineering
M.I.E.T Engineering College, Tiruchirapalli M.I.E.T Engineering College, Tiruchirapalli
muthukumaraneee@gmail.com priya24eee@gmail.com

The matrix converter is an advanced circuit topology that offers many advantages such as ability to regenerate energy back to the utility. In matrix converter, input supply voltage is equal to output voltage. The output voltage gets distorted due to changing modulation index. In this project matrix converter with low frequency cyclo converter operation is proposed with amalgamation methods. This proposed method will improve fundamental voltage and reduce the total harmonic distortion. This is achieved by varying modulation index from 0.1 to 0.9 in this proposed amalgamation methods. Simulations results are presented for Phase angle control method (HWSVFAM and QWSVFAM) and PWM method (PATTERN1 and PATTERN2) using software mat lab version 7.0.

Index Terms—Matrix Converter, Cyclo Converter, Half wave symmetry variable firing angle method, Quarter wave symmetry variable firing angle method, PWM.

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