7. Model of Space vector Indirect vector control with fuzzy logic controller of Induction Motor

With the help of Space vector Indirect vector control with fuzzy logic controller different simulation results are obtained individually and display on scope block.Where in figure. 7 three phase Iabc takes as a Actual current and Iabc* as a reference speed which is converted 3 phase into two phae by park's transformation and again converted into three phase by inverse park's.

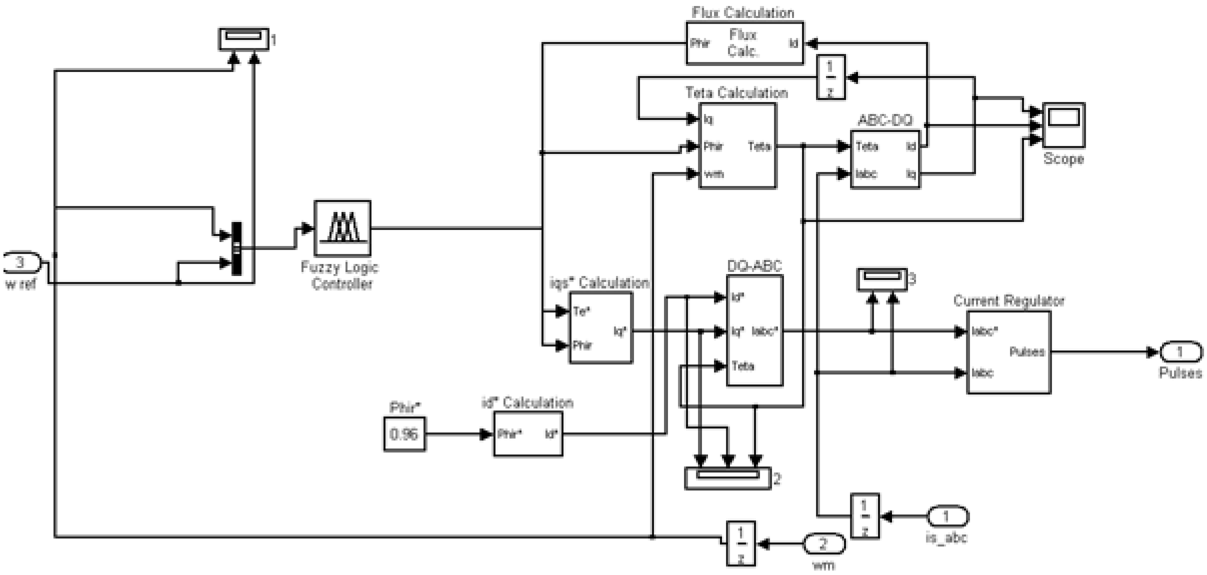

Figure 7: Simulink Model of Indirect vector control with fuzzy logic controller

8. Simulation Results

To verify the proposed scheme, a numerical simulation has been carried out by using MATLAB SIMULINK. In the performed simulation, certain stator flux and torque references are compared to the values calculated in the driver and errors are sending to the hysteresis comparators. The digital simulation studies were made by using MATLAB environment for the system described in Fig.6. The speed regulation loop of the induction motor drive is designed and simulated with fuzzy logic controller. The feedback control algorithms were iterated until best simulation results were obtained.

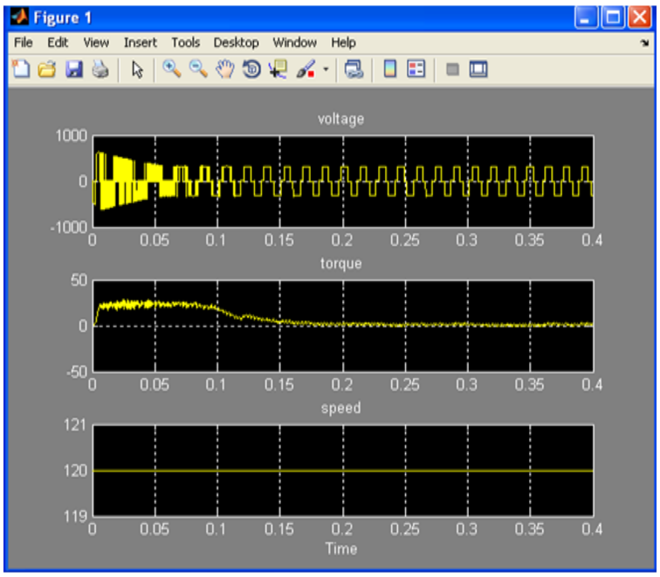

Figure 8: Output waveform of Voltage torque and speed

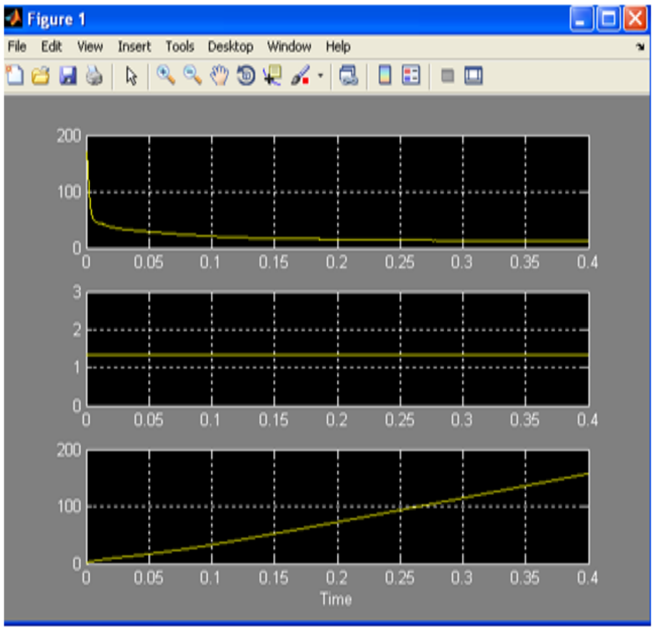

Figure 9: Output waveform of direct axis and qutrature axis and angle

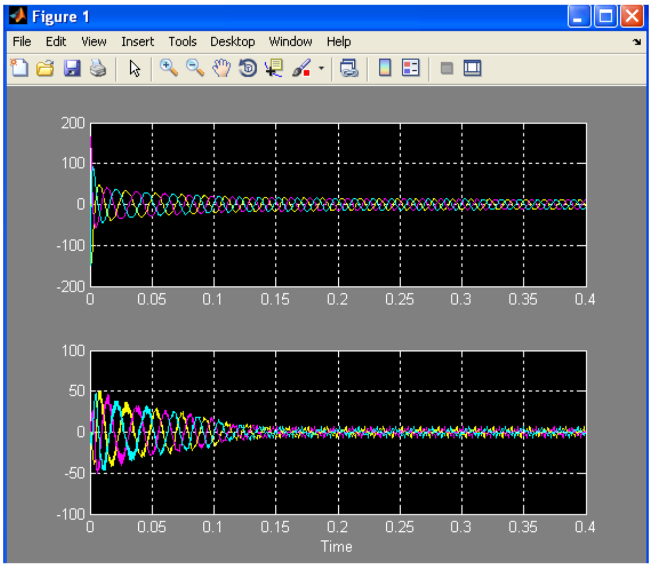

Figure 9: Output waveform of induction motor current

9. Conclusion

This paper presented of a induction motor which is used with intelligent fuzzy logic controller for obtaining accurate output results. The paper concept of fuzzy logic has been presented and the SVM based indirect vector controlled induction motor drive is simulated Fuzzy controller. The results of both controllers under the dynamics conditions are compared and analyzed.

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