In this paper three preferable reference frame used in the simulation of field oriented control of induction machines using d,q two axis theory is discussed. Different reference frames are studied as the variables involved are sinusoidal but to design the compensator for control of these variables it is required to convert them in dc variables because it is easy to analyze the linear equations involving these dc variables. This can be done by assuming the reference frame which is revolving at the same speed as that of the sinusoidal variables so that the net relative speed becomes zero and they behave as dc variables. Keeping in view of the above said need the different reference frames for Field Oriented Control of an Induction Motor are studied and analyzed. The whole system is modeled and simulated in MATLAB/Simulink environment.

References


6. www.renesas.com


**Index Terms**

Computer Science  
Control Systems

**Keywords**

Reference frame, Induction Motor, Field Oriented Control