Abstract

Computer simulation of two-leg ac voltage controller-fed three phase induction motor is attempted to find out an optimum firing angle combination of the voltage controller for better starting performance. Optimum firing angle combination is the firing angle at which the negative torque pulsations is zero with minimum acceleration time and other electrical characteristics like peak positive electromagnetic torque pulsations, peak starting current are having satisfactory values. The effect of variation of motor parameters on different performance characteristics are investigated to select a better motor parameter combination for a particular machine, which gives improved starting performance. Results show that, based on the computer simulation, slight modifications can be done for the motor parameters in the design stage itself, which may account for the approximations taken during the design stage.

References


**Index Terms**

Computer Science  Pattern Recognition
Keywords
AC voltage control  Computer simulation  Induction motor starting