Abstract

The main objective of this research paper is to deliver the selection criteria of PMBLDC Motor for certain industrial applications. In general, Industries uses large Horsepower (HP) Brushless DC Motors as the special drives. These motors offer low starting currents with high starting torque, and the ability to supply reactive KVA to the plant system if desired. For specific industrial applications, the following selection criteria’s are considered for PMBLDC drive.
Selection and Modeling of PMBLDC Motor for Torque Ripple Minimization

Which are Power densities, Speed range, Torque per unit Current, Feedback devices, Inverter Rating, Cogging Torque, Parameter Sensitivity, Ripple torque. The torque ripple is one of the major problems existing in the PMBLDC Motor which depends on Back Electromotive Force (EMF). The back EMF is constant in the conduction region. This paper also concentrates on the mathematical modeling of BLDC motor in a manner suitable to ripple torque analysis using MATLAB software tool.

References


Index Terms

Computer Science
Electronics
Keywords
Brushless Dc Motor  Selection Criteria  Torque Ripple.