البحث الثانى

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No of Authors	**3**		عدد المؤلفين
Authors Names	Amir Yassin Hassan, Ahmed Gouda Rohieem, **Saber Mohamed Saleh Salem**		أسماء المؤلفين
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ملخص البحث الثاني

ملخص البحث باللغة الإنجليزية :

Axial flux motors use less material and thus are inherently less expensive. They can also deliver a high-power density, which is four times that of a radial flux motor. That makes studying the control methods for this motor necessary. The purpose of this study is to introduce a new dynamic and steady-state response control technique for axial flux permanent magnet synchronous motors (AFPMSMs). Dynamic equations describe the control characteristics of axial flux permanent magnet motors. The AFPMSM model and the space vector pulse width modulation (SVPWM) inverter were created using MATLAB Simulink. For the AFPMSM motor with an SVPWM inverter, direct torque control (DTC) is provided. The results of the proposed control technique are simulated and analyzed, and it is found to provide good performance. According to the results, the proposed control method reveals advantages in reducing the ripples and pulsating of the torque while enhancing speed dynamic and steady-state response.