

عنوان مقاله:

Efficiency improvement by timely controlling power factor in permanent magnet synchronous motor using PSO algorithm

محل انتشار:

اولین کنفرانس الکترونیکی بین المللی کنترل، مدارهای الکتریکی، ارتباطات و شبکه های هوشمند (سال: 1393)

تعداد صفحات اصل مقاله: 5

نویسندگان:

Sadegh hesari - P.H.D Student Amirkabir University Of Technology, Tehran, Iran

.mohammad bagher naghbi sistani - Assistant professor of electrical engineering ,Ferdowsi University,Mashhad,Iran

خلاصه مقاله:

in this paper, a new method for controlling power factor in permanent magnet synchronous motor has been proposed in order to improve efficiency and decrease losses. In order to reach a in-time control for power factor, we have focused on parameters like current angle, torque angle, stator voltage and current in d axis stator. To this end, current angle, torque angle and stator voltage are considered as three key parameters in PSO to find the best id current. Recent studies have improved the performance of motor drive in an offline manner. In this paper, PSO algorithm has been employed to improve the efficiency and decrease the losses by receiving electromagnetic torque and motor output speed in an online manner. The results have been compared for the two mode of with and without PSO algorithm. The results confirm the proposed method

کلمات کلیدی:

efficiency, power factor (PF), permanent magnet synchronous motor, particle swarm optimization (PSO) algorithm

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/342877>

