الاية

قال تعالي:

﴿وسارعوا الى مغفرةٍ من ربكم وجنةٍ عرضها السموات والأرض أعدت للمتقين ﴾

آل عمران (133)

الاهداء

كل الشكر والعرفان الى كل من ساهم في اخراج هذا البحث وللاساتذه
الاجلاء

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ABSTRAC

We must study the dynamic performance of induction motors at different conditions to be sure that its work in perfect way. In this project we analyze and study two induction motors one of them have large power, the other one has small power. At first we applied a full voltage at the both motors, then we applied partial voltage by delta- star starter, then we applied mechanical load and after little seconds depose it. And then we extraction the results.

مستخلص

لا بد من دراسة ديناميكية المحركات الحثية عند ظروف مختلفة لضمان تشغيلها بصورة مثلى. في هذه الدراسة تم تحليل ودراسة محركين حثيين, أحدهما ذو قدرة كبيرة والآخر ذو قدرة صغيرة. أولاً تم تسليط الجهد الكامل علي كل من المحركين بعدها تم تسليط جهد جزئي عنى طريق بادئ حركه نجمة– دلتا, ومن ثم تم ادخال حمل ميكانيكي وعزله بعد فترة وجيزة ومن ثم إستخلاص النتائج.

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LIST OF SYMBOLS

vR, vY, vB	Stator voltages V
vr, vy, vb	Rotor voltages V
iR, iY, iB	Stator currents A
ir, iy, ib	Rotor currents A
vA, vB, va, vb	Stator and rotor voltages on A,B axis V
vD, vQ, vd, vq	Stator and rotor voltages on D,Q axis V
iA, iB, ia, ib	Stator and rotor currents on A,B axis A
iD, iQ, id, iq	Stator and rotor currents on D,Q axis A
Rs	Stator resistance Ω
Rr	Rotor resistance Ω
Ls	Stator inductance H
Lr	Rotor inductance H
M	Stator to rotor mutual inductance
Ms	Stator to stator mutual inductance
Mr	Rotor to rotor mutual inductance
θ	Stator angle
ωr	Mechanical speed r.p.m
J	Moment of inertia kg/m^2
s	Slip
F	Frequency Hz
p	Pole
Rm	No load resistance Ω
Xm	No load inductance Ω
Xir	Rotor mutual inductance
Xis	Stator mutual inductance
T	Torque N/m^2
Tb	Breakdown Torque N/m^2
C1	Phase transformations
C2	Commutator transformations
Te	Electrical torque N/m^2
Tm	Mechanical torque N/m^2

LIST OF TABLES