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## **Caculation Of Switched Reluctance Motor Torque During Beaking State**

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### **Abstract**

**An anylisis study has been done to demonstrate how braking resistance could be calculated in the switched reluctance motor (SRM). The switched reluctance motor (SRM) is used in the same way of DC machines; therefore the DC machine equations were used to compute the braking process. Comparison studies between the two machines were accomplished. A new and suitable method to obtain the torque functions in the SRM is suggested, in which the needed torque can be achieved in the steady or braking states. This method takes into account the variation of SRM torque among motors depending on the number of stator and rotor poles.**

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**Keywords: Switched Reluctance Motor torque**

For the abstract in Arabic see pages (241-252).

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### References

- 1- Dosoki, M, Bogos, H. "DC machines", Damascus University Publications, 1981/1982
- 2- Dosoki, M. Lectures in FMEE for Master students, Damascus University, 2001-2005
- 3- Sandouk A, Dosoki M, Harold H, "tasmim wa tanfiz mouharrek zou moumana magnatisia moutagheira", PhD Thesis, Damascus University, 2005
- 4- M.D. Cundev, L.B. Petkovska, "Control Analysis of a Switched Reluctance Motor", Trondheim, EPE, Volume 1,pp 619-624, Norway, September 1997.
- 5- Bausch, H., Kanelis, Feedforward Torque control Of aSwitched Reluctance Motor Based On Static Measurements, EuropeanTransactions on Electrical Power, Band 7 (997), Heft 6,s.373-380 .
- 6- Dr .Mahmoud Ahmad Abdulatif,Design considerations and performance of switched reluctance motors,Minufiya University,Egypt April,2001.
- 7- HessianMoghbelli,Gayle.E.Adams. Rechard G.Hoft" performance of a 10-HP switched reluctance motors and comparison with induction motor, IEEE, T-O-I-A,Vol.27,No,3, pp 531-538, May/ June 1991.
- 8- J.Corda,S.Masic,stephenson, "Computation and Expermental Determination of Running Torque Waveforms in Switched- Reluctance motors",IEE proceedings, part. B, Vol. 140, No.6,November 1993,pp 387