Patents

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Patents and Utility Models

• Prof. Yasser Gaber DessuokyY.G. Dessouky, "Operation of a switched reluctance motor from a single-phase ac supply", Invention, The Patent Officein UK, GB2419246, 2006.

(12)	UK Patent Ap	plication	1 (19)	GB	(11) 24	19 246	(13) A
					(43) Date of	A Publication	19.04.2006
(21)	Application No:	0422213.9	(51)		8 (2006.01)		
(22)	Date of Filing:	07.10.2004	(50)				
(71)	Applicant(s): Yasser Gaber Dessowky PO Box 1029, Dept of Elec & Control Engineering, Arab Academy For Science Technology, Miami, Alexandria, Egypt	ıy,	(52)	UK CL (Edition X): H2J JCSR J1P Documents Cited: GB 2157089 A JP 110178278 A US 4616165 A		WO 2003/06626 US 5909071 A	2 A3
	(con	tinued on next page)				(continued on	next page)

- (54) Abstract Title: Operation of a switched reluctance motor from a single-phase AC supply
- (57) A conventional switched reluctance motor includes a housing; a stator formed by laminating of electromagnetic steel plates and having a plurality of pairs of opposing stator pole portions; a rotor formed by laminations of electromagnetic steel plates and having a plurality of pairs of rotor pole portions. The rotor disposed in the stator such that when the rotor rotates, each of the rotor pole portions moves in and out of the alignment with each of the stator pole portions. On each of the stator pole portions, a coil is ound such that the coils which are wound on each of the pairs of opposing stator pole portions are connected in series with each other to form one phase winding. Each phase winding is connected in series with a switching element such as a thyristor to from one branch. All branches are connected in parallel to a single-phase AC supply. Thereby a magnetic flux is generated between each pair of stator pole portions when a current is supplied from the ac supply to the stator coil and repeated many cycles as long as the rate of change of inductance of this stator phase is positive. The number of cycles of phase current depends on the ratio between the rotor speed in radian per second to the angular frequency of the supply voltage in radian per second. A magnetic attractive force occurs between the rotor pole portions and stator pole portions as they approach one another. This magnetic attractive force produces a motoring torque which can be controlled by controlling the switching delay angle of the switching element where the higher the load torque, the lower the speed. This is because, for low speeds, the current repeats many cycles during the positive rate of change of inductance period and consequently the average torque is high while, for high speeds, the positive rate of change of inductance period and consequently the average torque is low.

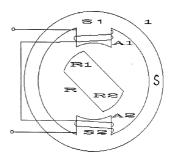


Fig. 1

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Prof. Mahmoud Elewa

M.M. Elewa M. M. Naim, , A.A. El-Shafei A.A. Moneer, (May 2020),"Method and unit for desalination of highly saline water in one stage using pervaporation technique and a method for membrane production" Patent No.: Eg29747, A.R.E. Application No. 201703344/. Filing Date.05/03/2017. Int.Cl.8-C 02 F 1/00.



M.M. Elewa, M. M. Naim,, A.A. Moneer, A.A. El-Shafei, M. Yehia et al., (Feb. 2017). Desalination Of Sea Water Using Pervaporation. Patent No.: Eg27868, Application No. 2012061089, Filing Date: 13/6/2012. International Patent Classification (IPC): INT.CL.8-B 01 D 61/36C 02 F 103/08B 01 D 71/16.



WIPO Link

M. M. Naim, A.A. Moneer, M.M. Elewa, A.A. El-Shafei, M. Yehia. (Apr. 2017). Desalination Of Simulated Seawater Using An Innovative Emulsion Liquid Membrane Technique. Patent No.: Eg 27920, Application No. 2013101534, Filing Date: 2/10/2013. International Patent Classification (IPC): INT.CL.8-B 01 D 61/40C 02 F 1/58C 02 F 1/26.



WIPO Link

• Prof. AbdulMonem AbdElBary Nasser



• Prof. Hazem Hassan



· Dr.Rola Afifi

Rola S. Afify, "A modified method for the formation and follow up hydrogen bubbles in "Hydrogen Bubble Generator" apparatus", Arab Republic of Egypt, Ministry of State for Scientific Research and Technology, Academy of Scientific Research and Technology, Egyptian Patent Office, patent no. 26319, (2013).



Rola S. Afify, "A new method for flow simulation", Arab Republic of Egypt, Ministry of State for Scientific Research and Technology, Academy of Scientific Research and Technology, Egyptian Patent Office, utility model no. 27032, (2015).



• Prof.Mohammed Said AbdelQader, And Eng.Samir Youssof "Welding and cutting a new oxy-gasoline cutting torch with fuel injection and control unit", Egyptian Patent Office, 2018, Vol. 797, Jan 2018 Issue, Page 79, Serial 65.

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