

Title (en)
METHOD AND APPARATUS FOR TORQUE RIPPLE REDUCTION IN SINUSOIDALLY EXCITED BRUSHLESS PERMANENT MAGNET MOTORS

Title (de)
VERFAHREN UND VORRICHTUNG ZUR REDUKTION DER DREHMOMENTWELLGIGKEIT IN SINUSFÖRMIG ERREGTEN BÜRSTENLOSEN PERMANENTMAGNETMOTOREN

Title (fr)
PROCEDE ET APPAREIL DE REDUCTION D'ONDULATION DE COUPLE DANS DES MOTEURS A AIMANT PERMANENT, SANS BALAI, SINUSOIDALEMENT EXCITES

Publication
EP 1430587 A4 20041229 (EN)

Application
EP 01977103 A 20010914

Priority
US 0128812 W 20010914

Abstract (en)
[origin: WO03026105A1] A method for determining a dimension in a motor is described. By applying Fourier analysis, a sequence of terms is obtained. Since the fifth harmonic is the most undesirable term, the minimization of the fifth harmonic term will make resultant waveform closer to sine wave. Based upon the above, a determination of an angle delta (22) is described, wherein the fifth harmonic term of the sequence of terms is minimized. An electronic motor having a rotor (26) and a set of slot on said rotor surface (36) having a set of magnets (46) with a width delta (22) along the circumference (30) of said rotor surface (36) is described., The width delta (22) is determined by a method that includes applying Fourier analysis thereby a sequence of terms is obtained. Since the fifth harmonic is the most undesirable term, the minimization of the fifth harmonic term will make resultant waveform closer to sine wave. Based upon the above, a determination of an angle delta (22) is described, wherein the fifth harmonic tem of the sequence of terms is minimized.

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CPC (source: EP US)
H02K 1/278 (2013.01 - EP US); **H02K 15/03** (2013.01 - EP); **H02K 29/03** (2013.01 - EP)

Citation (search report)

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