Title (en)

Feedback control for reduction of cogging torque in controlled current AC motor drives and method.

Title (de)

Verfahren und Schaltung zur rückgekoppelten Regelung von Wechselstrom-motoren zwecks Verminderung des pulsierenden Drehmoments.

Title (fr)

Procédé et circuit électrique pour commander par contre-action les moteurs à courant alternatif en vue de réduire la pulsation du couple.

Publication

EP 0000530 A1 19790207 (EN)

Application

EP 78100415 A 19780718

Priority

US 81762677 A 19770721

Abstract (en)

A decogging feedback control for current source inverter motor drives uses a change of instantaneous torque feedback signal with no dc component that is a function of only the instantaneous pulsating component of measured torque. The change of torque signal modulates the voltage applied to the dc link and therefore the dc link current to materially reduce the detrimental cogging torque pulsations and stabilize the motor, and can be switched out at a low frequency above which it is not needed so that the motor can respond properly to rapid variations in torque.

IPC 1-7

H02P 7/62

IPC 8 full level

H02P 27/06 (2006.01)

CPC (source: EP US)

H02P 21/22 (2016.02 - EP US); **H02P 27/06** (2013.01 - EP US); H02P 2209/01 (2013.01 - EP US)

Citation (search report)

- [A] FR 2193285 A1 19740215 - SIEMENS AG [DE]
- [A] FR 2308137 A1 19761112 - GEN ELECTRIC [US]
- [A] US 3593083 A 19710713 - BLASCHKE FELIX
- [A] US 3800199 A 19740326 - WEIGAND W
- [A] FR 2172491 A5 19730928 - YATSUK VLADIMIR [SU]
- IEEE TRANSACTIONS ON INDUSTRY APPLICATIONS, vol. 1a-13, nr. 2, March/April 1977, New York, A.B.PLUNKETT: "Direct flux and torque regulation in a PWM inverter-induction motor drive", pages 139 to 145

Cited by

EP2958223A4

Designated contracting state (EPC)

DE FR GB SE

DOCDB simple family (publication)

EP 0000530 A1 19790207; DE 2857198 A1 19800207; GB 2041676 A 19800910; GB 2041676 B 19820721; JP S5441415 A 19790402; SE 7907233 L 19790830; US 4137489 A 19790130

DOCDB simple family (application)

EP 78100415 A 19780718; DE 2857198 A 19780718; GB 7923003 A 19780718; JP 8781678 A 19780720; SE 7907233 A 19790830; US 81762677 A 19770721