

Title (en)  
SEPARATELY EXCITED DC MOTOR WITH BOOST AND DE-BOOST CONTROL

Title (de)  
FREMDERREGTER GLEICHSTROMMOTOR MIT FELDSTÄRKUNGS- UND -SCHWÄCHUNGSSTEUERUNG

Title (fr)  
MOTEUR C.C. A EXCITATION SEPARÉE, AVEC COMMANDE D'AUGMENTATION ET DE BAISSÉ DE TENSION

Publication  
**EP 1020017 A1 20000719 (EN)**

Application  
**EP 98950806 A 19980929**

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Abstract (en)  
[origin: WO9917436A1] A motor control system is provided comprising an electrically charged battery, an electrical motor, a battery voltage sensor, a motor speed sensor, an armature voltage sensor, an armature current sensor, and a microprocessor. The magnitude of the armature current applied to the motor is a function of a predetermined armature current setpoint signal and the magnitude of the field current applied to the motor is a function of a predetermined field current setpoint signal, a field current correction signal, and a field current de-boost signal. The microprocessor programmed to generate an armature current setpoint signal, a field current setpoint signal, and an armature voltage reference signal. Further, the microprocessor is programmed to (i) compare the armature voltage reference signal to the measured armature voltage signal and generate an armature voltage error signal based on the comparison; (ii) generate the field current correction signal as a function of the armature voltage error signal; (iii) generate an armature-to-field current check function, wherein the check function defines a set of armature current to field current ratio values as a function of armature current; (iv) calculate a ratio of the measured armature current signal to the field current setpoint signal to establish an operating ratio value, (v) compare the operating ratio value to a corresponding armature current to field current ratio value of the armature-to-field current check function, and (vi) establish the field current de-boost signal, wherein the magnitude of the field current de-boost signal is a function of the measured armature current signal and the comparison of the operating ratio value to the corresponding ratio value.

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Citation (search report)  
See references of WO 9917436A1

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