

Title (en)

METHOD AND DEVICE FOR THE ANGLE SENSOR-FREE POSITION DETECTION OF THE ROTOR SHAFT OF A PERMANENTLY EXCITED SYNCHRONOUS MACHINE BASED ON CURRENT SIGNALS AND VOLTAGE SIGNALS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR WINKELSENSORLOSEN POSITIONSERFASSUNG DER ROTORWELLE EINER PERMANENTERREGTEN SYNCHRONMASCHINE AUF BASIS VON STROMSIGNALEN UND SPANNUNGSSIGNALEN

Title (fr)

PROCÉDÉ ET DISPOSITIF POUR LA DÉTECTION DE POSITION, SANS CAPTEUR ANGULAIRE, DE L'ARBRE DE ROTOR D'UNE MACHINE SYNCHRONE À EXCITATION PERMANENTE, SUR LA BASE DE SIGNAUX D'INTENSITÉ ET DE SIGNAUX DE TENSION

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Application

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Abstract (en)

[origin: WO2010099989A1] The present invention relates to a device and to a method for determining position information of the rotor shaft of an electric machine on the basis of at least one input signal received by the electric machine, wherein the received input signal is supplied to a model of the electric machine. The position information of the rotor shaft is determined by means of the model based on the supplied input signal, wherein the model represents non-linear saturation effects of the electric machine. The model of the electric machine is an expanded Kalman filter in which the non-linear saturation effects of the electric machine are described by a polynomial.

IPC 8 full level

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