

FreshPatents.com: Electricity: motive power systems - USPTO Class 318 Patent Applications Update

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20090278481 - Apparatus and system for efficiently controlling a hub motor

An apparatus, system, and method are disclosed for an efficient hub motor. A stator is attached to a shaft. Coils are embedded in the stator in a circular pattern. Two rotors are rotatably coupled to the shaft with the stator between them. Permanent magnets are embedded in each rotor. Each permanent magnet and each core has a similar cross-sectional shape. The permanent magnets are positioned in a circular pattern corresponding to the coils. The permanent magnets are positioned so that when a coil aligns with a permanent magnet a next coil aligns between two magnets. Shorting bars connect exterior edges of the permanent magnets. A sequence control connects each coil so that current flows in a coil in one direction and the sequence control disconnects the coil and reconnects the coil with current flowing in the opposite direction in response to a set of permanent magnets aligning with a coil....

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20090278482 - Servomotor current control method, current control program, recording medium, servomotor, and injection molding machine

A method of controlling a current by supplying a d-axis current in order to prevent a voltage saturation includes: defining an amount of the d-axis current as $I_d = |I_{dmax}| \cdot \sin \theta$; continuously comparing a voltage command value with the voltage command value threshold V_o in a predetermined cycle; extracting a predetermined number N_o of latest comparison results in terms of time; setting a phase angle θ to be 0° when a number N of the comparison results out of the predetermined number N_o of the comparison results is equal to or less than an integer N_b ; and increasing the phase angle θ depending on largeness of the number N when the number N is more than the integer N_b

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20090278484 - Fan conducted noise reduction

A power circuit has an input circuit for coupling to a power supply to receive input current. One or more fans are driven with current pulses from an output circuit. Commutation noise from the current pulses back to the power supply is minimized. The commutation noise may be minimized by providing an isolated current source, by staggering the phase of pulses to multiple motors to increase the frequency and filter out the commutation noise, or by a combination thereof....

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A motor control apparatus for an electric vehicle has an AC motor system including a power conversion unit and a motor/generator. The power conversion unit performs conversion between DC power and AC power to drive the motor/generator. The motor control apparatus further includes a decoupling control section configured to perform decoupling control, which restricts interference between system voltage control and motor torque control, by correcting a control state amount of one of the system voltage control and the motor torque control by a control state amount of the other of the system voltage control and the motor torque control....

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20090278485 - Device and method for determining the rotational position of a rotor in an electric machine

The invention relates to a device and a method for determining the rotational position of the rotor of an electric machine that has star-connected pole winding phases. The device is equipped with a unit for applying voltage pulses (14-16) to at least one of the phases (1-3) and a unit that evaluates the neutral point potentials generated by the voltage pulses (14-16). The invention is characterised by the provision of the aforementioned unit for applying time-delayed voltage pulses (14-16) to different phases (1-3) and the unit for producing at least one differential between the neutral point potentials generated by said voltage pulses....

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20090278486 - Motor controlling method for rotating a lift arm of an adjustable bed according to a predetermined bending angle of the lift arm

In an adjustable bed, a bending angle of a lift arm is precisely adjusted according to generated signals corresponding to a wheel rotated by a motor of the adjustable bed or according to a current state related to the wheel. The signals are generated according to whether light is obstructed by gratings, according to whether a magnetic force is detected, or according to a change of a magnetic field. The current state is current resistance of a variable resistor disposed near the wheel....

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20090278487 - Fan control circuit

A fan control circuit for controlling a fan to dissipate heat from an electrical device includes a comparator and an electrical switch. The comparator has a comparator input terminal, a comparator reference terminal, and a comparator output terminal. The comparator input terminal is connected to a power source via a first resistor and is also connected to the electrical device to receive a working current draw of the electrical device. The comparator reference terminal is receiving a reference voltage. The comparator output terminal is capable of outputting a comparison result between a voltage received by the input terminal and the reference voltage. The electrical switch has a control terminal, a first terminal, and a second terminal. The control terminal is connected to the comparator output terminal of the comparator to receive the comparison result. The first terminal is connected to the power source via a resistor. The second terminal is grounded and connected to the terminal via a fan....

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