Contactless power supply system

The design of new contactless power supply system involves some tradeoffs, the biggest one of which is between the performance and the cost of the system. Well-coupled electromagnetic structure is necessary for low cost system. Structure (b) ...

The simulation and experiment data show the effectiveness of the proposed power supply system. KEYWORDS: Contactless power supply(CPS), Pickup, Boosting circuit, Full bridge IGBT. I. INTRODUCTION The contactless power ...

The regenerative braking energy feedback of the contactless traction power supply system needs to be realized by dynamic bidirectional inductively coupled power transfer (ICPT). A novel ...

Contactless power supply system can operate reliably at DC-900 V input voltage and adapt to the field voltage fluctuation range. Carrying out the oven test under the current of the transmitting coil 240 A, The temperature rise of the ground system and the vehicle system are controllable, which ensures the long-term reliability and stability of ...

R. Li et al.: Research on Energy Distribution of Regenerative Braking in Station for Contactless Traction Power Supply System electri"ed railways consumed 71.1 billion kWh of electricity (up 6.4% ...

New contactless power supply system realizes contactless power transmission with high security and reliability [1] ch systems can be used for non-contact battery charging, robotic applications ...

EMS systems with an ENRX contactless power supply system handle light and heavy loads and single or multi-axis applications. With an inductive power supply, each trolley carries to travel at different speeds, controls, communications, and power electronics, allowing it ...

The abbreviation "CPS®" stands for "Contactless Power Supply." This system supplies power to mobile electrical consumers without any physical contact. The power is in-ductively transmitted from a stationary (primary) conductor to a mobile consumer. A unique feature of CPS ® is that data can also be transmitted via this primary conductor.

Firstly, the contactless sec-tional power supply scheme is discussed in detail; secondly, the circuit topology of the primary winding parallel coupling mechanism is analyzed by using the mutual inductance coupling model; finally, the function and performance of the power supply mode is given by an example, which proves that the system can ...

Power Floor is our system family for contactless power supply to conveyors such as Automated Guided

Vehicles (AGV), smart robots, tow vehicles and unit load carriers. All the cables are easily embedded in the floor and the loops also define the vehicle"s traveling paths. The result is a level floor with no obstacles for people, that can ...

Inductive Power Transfer was the first large scale contactless power transfer system which has revolutionised the way all kinds of moving machines may be supplied with electrical power. Based on the known principle of electromagnetic induction and developing it further to meet modern industrial needs, Conductix-Wampfler sets the bechmark in the ...

Design Of Contactless Power Supply(Cps) System 1,Nguyen Thanh Phuong and 2,Phan Ngoc Bich 1,Hutech High Technology Research Instituite ABSTRACT : This paper describes a high power generating contactless power supply system for DC power with 300 V and 10 A. It is composed a primary power converter and a secondary power converter.

Contactless Power Transfer (CPT) was introduced to the world in the 1890"s, when after successful experiments, Nikola Tesla demonstrated a lightbulb powered wirelessly by a tesla coil at the 1893 Chicago World fair. [1] ... W = 1 / 2 CV 2, where C is the capacitance and V is voltage, this charging system is not ideal for high-power ...

Magnetically levitated vehicles need a contactless energy transmission system to supply on-board components without physical contact to a guiding rail. In contrast to stand-alone contactless power supply (CPS) systems this paper introduces a combined CPS and electromagnetic guiding system (MGS). The inductive energy transmission is realized by ...

Especially in future, the hybrid solar energy generation system with battery and fuel cell will be widely used as an independent distributed power generation system. In this paper, a solar power hybrid home generation system using a contactless power supply (CPS) that can transfer an electric power without any mechanical contact is proposed.

The regenerative braking energy of high-speed railway accounts for about 10% of traction energy consumption, which will be higher under special conditions. The regenerative braking energy feedback of the contactless traction power supply system needs to be realized by dynamic bidirectional inductively coupled power transfer (ICPT). A novel regenerative braking ...

The contactless traction power supply system topological structure based on external power supply system of DC 1500V is put forward, the power supply model for rectifier sets, the energy converting device and primary transmitting coil and secondary pickup coil of the external DC power supply system are established. Four contactless power supply ...

The Inductive Power Transfer solution from Conducitx-Wampfler was the first large scale contactless power transfer system which has revolutionized the way all kinds of moving machines may be supplied with

electrical power.

II. INDUCTIVE POWER TRANSFER. The IPT technology for WPT exploits the variation of the magnetic field flux shared among two or more physically decoupled coils to transfer electric power to one, two, or more loads [Reference Covic and Boys 11].Electric transformers are based on inductive coupling too, although are usually designed to transform ...

Contactless power supply systems are of high interest in all small power and large power applications. Many high efficiency systems use the resonant operation mode. A parallel compensation system ...

In a contactless power supply system 10 having a secondary coil 13 receiving electric power generated from a primary coil 12 to be connected to a high-frequency power source 11, and a resonance coil 14 arranged in direct contact with the secondary coil 13 in between the primary coil 12 and the secondary coil 13, respective planarly-viewed areas of the secondary and the ...

This article examines the application of a contactless power supply system to battery-run or hybrid trains. The potential advantages of this system include low noise emittance, maintenance-free features, and the elimination of electric shocks or leaks. The system"s disadvantages include a reduction in energy supply efficiency as a result of energy ...

This contactless energy transfer topology is designed to supply power to the moving parts in high-precision mechatronic systems without cable slabs. The proposed topology provides long-stroke contactless energy transfer capability in the x - y plane and a short-stroke movement of a few millimeters perpendicular to the plane.

A contactless energy transmission system is essential to supply onboard systems of magnetically levitated vehicles without physical contact to the guide rail. This paper introduces a contactless power supply (CPS) where the primary is integrated into the guide rail of an electromagnetic guiding system (MGS). The secondary is mounted onboard the elevator car.

The perfect complement to the solutions with contactless energy transfer MOVITRANS®: The MOVI-DPS® power supply with its components enables intelligent power and energy management in mobile and stationary applications. In this way, you protect your system against power fluctuations or power failures and ensure maximum availability.

The centralized wear-free, inductive power supply system with MOVITRANS® modernizes mobile conveyor systems. ... This contactless energy supply enables high speeds of more than 10 m/s. And as line cables are routed under the floor, there are no longer any obstacles disrupting transverse traffic.

FOR CONTACTLESS POWER SUPPLY SYSTEMS vPOWER CONTACTLESS POWER SUPPLY. vPOWER - CONTACTLESS POWER SUPPLY vPower is the next generation of contactless power supply

developed by VAHLE. Utilizing a frequency of 140kHz and silicon carbide semiconductors - vPower offers a smaller size, lower cost

Web: https://ekusenitours.co.za