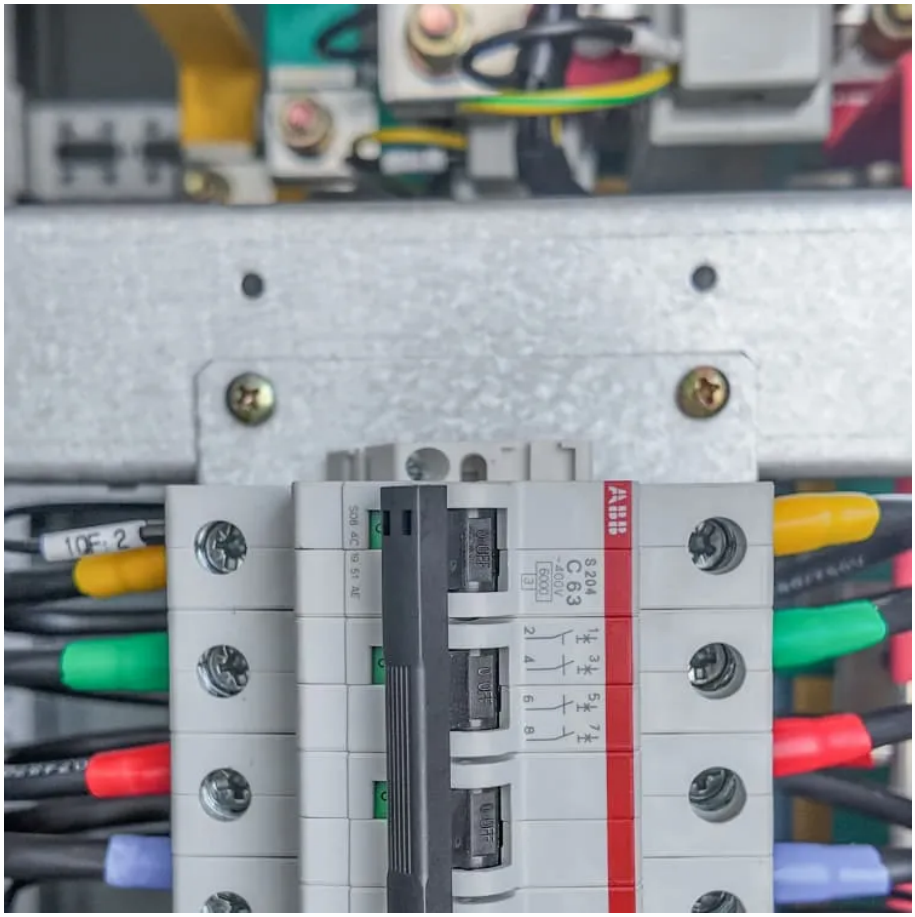
Medical high voltage inverter control method



Overview

The invention discloses a control system of a medical X-ray high-voltage generator, which comprises a high-voltage generator body, wherein a high-voltage oil tank arranged on a main line is arranged in the high-voltage generator body, and a regulating.

The invention discloses a control system of a medical X-ray high-voltage generator, which comprises a high-voltage generator body, wherein a high-voltage oil tank arranged on a main line is arranged in the high-voltage generator body, and a regulating.

series resonant soft-switching, high voltage doubling and rectifying, full bridge inverter and pulse width modulation. The topologic structure and simulating result are isted detailed, including high frequency inverter circuit, doubling and rectifying circuit and the controlling system. At last.

Along with the wider application of PWM technology used in inverting and the inverse frequency fields, as well as the rapid development of IGBT, MOSFET and other power switching device of such PWM control of high-voltage power supply toward miniaturization, high frequency, intelligent, high.

The traditional high-voltage (HV) power supply with PID control algorithm has large output ripple and poor output voltage stability. A single neuron adaptive PID control based HV power supply for medical mammography X-ray machine is designed in this paper. Since the neural network has self-learning.

Abstract- A high voltage power supply is a very useful source which can be effectively used in many medical applications like medical imaging devices, blood analyzers, DNA equipment, robotic surgical devices and Electrocautery. In this study designing of High voltage circuit (2000 V) is proposed.

The invention discloses a control system of a medical X-ray high-voltage generator, which comprises a high-voltage generator body, wherein a high-voltage oil tank arranged on a main line is arranged in the high-voltage generator body, and a regulating circuit is arranged on the main line in.

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VAPOR LIQUID

The traditional high-voltage (HV) power supply with PID control algorithm has large output ripple and poor output voltage stability. A single neuron adaptive PID control based HV power supply ...

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New flatness-based control of a high-voltage generator for medical ...

This study presents a new flatness-based control scheme for the quantum series-parallel LCC-type resonant converter with output voltage doubler for high-voltage pulse ...

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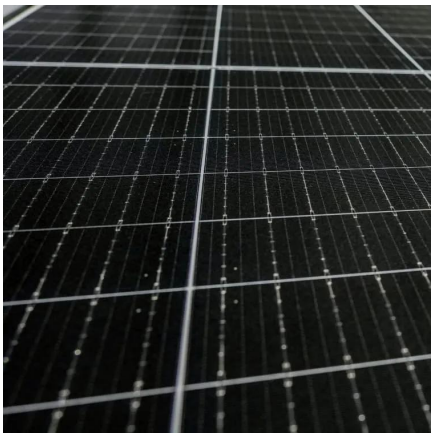

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Design and Implementation of High Voltage Generator for ...

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A X-ray HV generator, which has output voltage from 60kV to 160kV and tube current from 1mA to 10mA, is developed successfully by applying the technology of LC series ...

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CN111726924A

The invention relates to the technical field of high-voltage generators, in particular to a control system and a control method of a medical X-ray high-voltage generator.

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Piezoelectric Transformer-Based High-

Voltage Pulse Generator ...

In this paper, a new application of Piezoelectric Transformer (PT)-based power converters to generate high-voltage (HV) bipolar pulses for medical electroporation therapy is proposed.

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High Voltage Inverter Design

The control circuit includes a current, voltage sampling and processing unit, PWM signal generation and a driver circuit, micro-controller, keyboard ...

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Portable medical high-frequency high-voltage generator of X-ray ...

The invention relates to a method and device for controlling a portable medical high-frequency high-voltage generator of an X-ray machine based on an ARM (advanced RISC machines) ...

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New flatness-based control of a high-voltage generator for ...

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Research of a High Voltage Generator for

Medical ...

A X-ray HV generator, which has output voltage from 60kV to 160kV and tube current from 1mA to 10mA, is developed successfully by ...

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High Voltage Inverter Design

The control circuit includes a current, voltage sampling and processing unit, PWM signal generation and a driver circuit, micro-controller, keyboard and LCD parameter input, part of the ...

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Research of a High Voltage Generator for Medical

Driving controller, full-bridge inverter, current output unit: the driving controller controls the on-off of IGBT to output low value current to filament transformer, and the high value current from ...

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