

Article "Design and Simulation of a Multimodule Superconducting Inductive Pulsed-Power Supply Model for a Railgun System" Detailed information of the J-GLOBAL is an information service managed by ...

Using an inductive storage technology and pulse forming circuits, a shorter pulse current rising time is obtained. The inductor energy is fed back to the input source not discharged to the load, resulting in a ...

Superconducting pulsed-power supply (SPPS) provides an efficient method for both high-density inductive energy storage and high current pulse generation. An SPPS consisting of eight ...

Capacitive energy storage have been widely used in area of pulsed power, however, it canpsilat be used in application which requires long time energy storage (for example, accumulation of solar energy) ...

In our previous studies, a repetitive IPPS circuit was proposed based on a high temperature superconducting pulsed power transformer (HTSPPT), which can recover the residual energy of the ...

A laboratory set-up of a 0.5 MJ superconducting pulsed power supply is described. This combination of a superconducting inductive energy storage system with a superconducting pulse ...

The topology category based on high-temperature superconducting pulse power transformer (HTSPPT) is an important branch of inductive pulse power supply (IPPS) for rail guns. Optimization design of the ...

We have been developing an inductive pulsed power supply (PS) consisting of several superconducting pulsed power transformers with Marx generator methodology. Each of these pulsed power ...

In the superconducting inductive-capacitive hybrid (meat-grinder) pulsed-power supply, the capacitance of switched-capacitor was also required to increase when the ratio of inductors was increased. It will ...

A technology of pulse transformer and pulse power supply, applied in high-efficiency power electronic conversion, electrical components, output power conversion devices, etc., can solve the problems of ...

High energy density, low electrical loss, and high current pulse are required for pulsed power supplies driving an electromagnetic launcher. HTSPPT is an important device for ...

The power supply systems for future electric weapons in mobile applications require energy storage devices that feature high power densities. These can either be superconducting inductive energy ...

Abstract A kind of pulse power technology is researched in this paper. According to the characteristics of superconducting inductive storage system and superconducting switch, the ideal ...

The inductive pulsed power supply (IPPS) circuit with high-temperature superconducting pulse transformer (HTSPPT) have great application potential in the field of electromagnetic launch (EML). ...

Superconducting inductive pulsed power supplies have attracted a lot of attention due to its lower electrical loss and higher energy storage density than traditional inductors. To effectively improve ...

In our previous studies, a repetitive inductive PPS circuit topology based on a bridge-type capacitor switching circuit and a high-temperature superconducting pulsed power transformer ...

The inductive pulse power supply (IPPS) used for electromagnetic emission device has a large amount of residual electric energy wasted after the projectile is discharged. To address this problem, a ...

Inductive energy storage for pulsed power supplies is considered to have great potential because its energy density is 1 order of magnitude higher than that of capacitive one. Associating with the ...

With the development of superconducting energy storage technology, inductors are becoming a promising choice for pulsed power supplies. In our previous work, an improved repetitive ...

High temperature superconducting pulsed power transformer (HTSPPT) provides an efficient method for inductive energy storage and current multiplication. The primary inductor of ...



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