

The advantages of inductive energy storage (IES) generators for increasing the pulse energy, power, and duration for nitrogen laser pumped by self-sustained transverse discharge have been ...

A laboratory repetitive inductive storage power supply (IPS) for the ignition of an electrothermal chemical (ETC) gun is described. Eight years ago, it was designed for delivering to an ET load ...

A newly developed small-sized IES (inductive energy storage) circuit with static induction thyristor at turn-off action was successfully applied to an ignition system. This IEC circuit can generate repetitive nanosecond pulse discharges. In this paper, the ignition system using repetitive nanos

In the ignition system, tiny spots are coated on the cathode surface to induce plasma flow. Such a setup has the advantages of simplicity, low price, small size, and low weight and is suitable ...

It is designed to deliver a 200-ns-long 500-kV pulse into a 10  $\Omega$  load. The primary energy storage of the ... Expand. 6. Save. ... The pulsed power generator with an inductive energy storage system is investigated as a driver for a high power microwave source. The length and diameter of an exploding wire as an opening switch are ...

In the ignition system, tiny spots are coated on the cathode surface to induce plasma flow. Such a setup has the advantages of simplicity, low price, small size, and low weight and is suitable for microsatellites. ... Design and demonstration of micro-scale vacuum cathode arc thruster with inductive energy storage circuit. / Li, Yueh Heng; Pan ...

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Sugai et al. [7] constructed an inductive energy storage circuit using a semiconductor opening switch, which was used to output pulsed voltages with a short pulsewidth and a fast rise for ...

The increasing demand for CubeSat missions with limited budgets and constrained timelines necessitates the development of innovative propulsion systems. This paper focuses on vacuum arc thrusters (VATs) and investigates the implementation of battery-driven discharge for triggerless firing. VATs offer a promising alternative for CubeSat propulsion, ...

Inductive Ignition", or HBI, since it features inductive energy Storage in the magnetic core of the ignition coil

# Inductive energy storage ignition

as in the conventional inductive System, but also features energy Storage at a higher and approximately constant Voltage  $V_c$ , typically on an energy Storage electrolytic capacitor, for delivery to the magnetic core of the ignition coil.

Before we get into the details of choosing among the several different MSD capacitive discharge ignition (CDI) boxes, it might be worthwhile to understand the difference between a CD and a traditional inductive ignition. Let's start with the inductive-discharge ignition that is the type of ignition used on every production car for the last ...

Download Citation | Energy Storage and Deposition Characteristics of Spark Ignition System | Time-resolved current and voltage measurements for an inductive automotive spark system were made. The ...

Both methods use inductive energy storage (IES) instead of traditional capacitive energy storage (CES), which means that the PFLs are charged by current instead of voltage. One of the methods (Type A) used an additional transmission-line-transformer (TLT) to achieve the output voltage adding from multiple PFLs, while the other method (Type B ...

Ignition User Manual About this Manual . In this manual, you will find reference information along with step-by-step instructions. The final goal of the content and information provided here is to help you gain understanding of Ignition concepts and to accomplish tasks within Ignition so that you can be productive and effective while working on your own projects.

One avenue of development to improve the operational lifetime of VAT systems is through the implementation of high C-rating Li-ion batteries capable of directly sustaining the ...

An apparatus for producing a vacuum arc plasma source device using a low mass, compact inductive energy storage circuit powered by a low voltage DC supply acts as a vacuum arc plasma thruster. An inductor is charged through a switch, subsequently the switch is opened and a voltage spike of  $L di/dt$  is produced initiating plasma across a resistive path separating anode ...

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