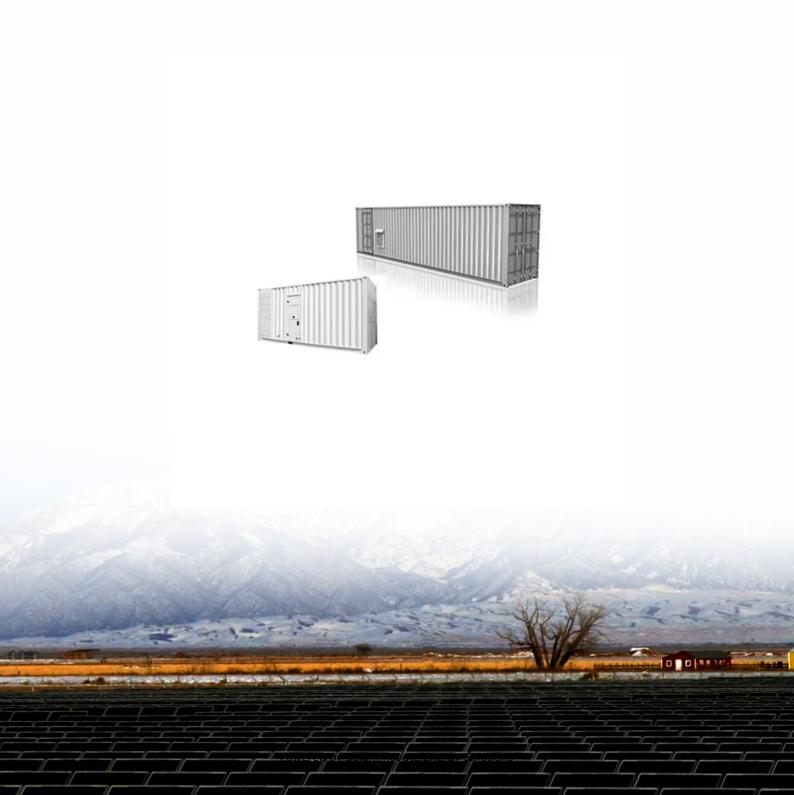


SolarInnovate Energy Solutions

How much energy can an electromagnetic launcher store





Overview

How are electromagnetic launchers supplied?

Electromagnetic launch-ers are generally supplied by capacitor banks. These are very voluminous because of their low energy density on one side, and because of the poor supply chain yield on the other side. A SMES, being an inductive pulse power source, is particularly adapted for supplying directly an electro-magnetic launcher with rails .

Why are electromagnetic launchers important?

Electromagnetic launchers have been widely investigated because of the potential to achieve velocities exceeding those that can be practically attained in powder and other thermodynamic guns, in which the maximum velocity is limited by the specific energy of the known propellants.

Are chemical launchers better than electromagnetic launchers?

In recent years conventional launchers like steam launchers, chemical launchers are replaced by electromagnetic launchers with auxiliary benefits. The electromagnetic launchers like rail- gun and coil-gun elevated with multi pole field structure delivers great muzzle velocity and huge repulse force in limited time.

What is electromagnetic coil-gun launcher?

The Electromagnetic coil-gun launcher consists of capacitor bank, solenoid coils and projecting objects. The coil-gun launchers have series of solenoid coils which accelerate the projecting object placed inside the coils. These coils use electromagnet in the configuration of linear motor to accelerate a projecting object.

What is an electromagnetic launcher (EML)?

An Electromagnetic Launcher [EML], which is sometimes referred to as an electromagnetic railgun, uses electricity to propel a projectile.



What are the different types of electromagnetic launchers?

Electromagnetic have two basic categories, i.e. rail-gun launcher and coil-gun launcher. Coil gun launcher is differentiated by its design structure and properties in five categories Induction coil-gun, Reconnection coil-gun, Reluctance coil-gun, helical coil-gun, Thompson's ring.



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Thermal and electromagnetic analysis of an electromagnetic launcher

May 31, 2003 · An advanced high-power electromagnetic launcher (EML) improves performance by as much as 30% over conventional launchers. Electrical energy is the main driving source ...

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Electromagnetic Launcher: Review of Various Structures

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Electromagnetic Launcher: Review of Various Structures

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