

This paper focuses on the design and testing of the mechanical bearing system used as a backup to support the high speed rotor in cases of the primary bearing system, magnetic bearings, ...

An AMB supported, 140 kW energy storage flywheel has been developed to provide 15 seconds of ride-through power and UPS service in conjunction with a diesel generator set. The flywheel, ...

This document summarizes the design, fabrication, and testing of a 5-kWh/100-kW flywheel energy storage system utilizing a high-temperature superconducting bearing developed at the ...

The present invention provides an optimized flywheel energy storage system utilizing magnetic bearings, a high speed permanent magnet motor/generator, and a high strength flywheel system.

Magnetic bearing supported rotating machinery, whether based on a vertical or horizontal rotor, needs several sub-systems responsible for the radial and axial levitations. Typically, two radial ...

Investigation of Combined Motor/Magnetic Bearings for Flywheel Energy Storage Systems Dr. Hofmann's work in the summer of 2003 consisted of two separate projects. In the ...

Abstract--Kinetic energy storage systems have a long history, but in the last half a century many studies and projects aimed to make this form of energy storage competitive with other systems ...

For high speed kinetic energy storage it is essential that the flywheel, which incorporates the motor and hybrid magnetic bearing, is operated in a vacuum. Under these conditions, the ...

