

TechBriefs

Savannah River National Laboratory

U.S. DEPARTMENT OF ENERGY • SAVANNAH RIVER SITE • AIKEN • SC

srnl.doe.gov

At a glance

- > Quick assembly
- > Quick disassembly
- > No catch points
- > No pins to lose
- > No inadvertent releases
- > Impact resistant
- > U.S. Patent 7,575,389

Contact Information

Dale Haas

Commercialization Manager

Savannah River National Laboratory
Bldg. 773-41A, Room 238
Aiken, SC 29808

Phone: 803.725.4185

FAX: 803.725.4988

E-mail: dale.haas@srnl.doe.gov



Magnetic Release Coupling

An engineer at the Savannah River National Laboratory (SRNL) has developed a magnetic release coupling that offers features unavailable in coupling technologies currently on the market.

Background

The magnetic release coupling was originally conceived to reduce exposure of works to radiation and to eliminate inadvertent decoupling of pipe connections. The magnetic coupling provided a quick disconnect connection that did not require time consuming assembly and disassembly while providing a secure connection with a streamlined outer profile for use with no catching or interference problems. The coupling also provided excellent response to impact. After conception, the coupling was projected into other uses such as torque transfer, component connections, hidden connections and tension release mechanisms.

Versatile design

The design features of the magnetic release coupling provide a versatile means of coupling for a number of situations. The coupling is currently being used as a means of remote camera and equipment, mounting and for extension pole assembly for deployment in radioactive environments. The device has been designed to travel through 2" diameter assess ports and could be built to pass through even smaller openings.

Many uses

This technology can be applied to any industry requiring connections that are tough, quick connecting and disconnecting, and require only a magnetic key for operation. Some prospective areas of use would include torque transfer, pipe connection, electrical connection, hose connection, electrical box closure, cabinet closure, tire installation, tubular frame assembly, antennae assembly, and pavilion assembly.



TechBriefs

Savannah River National Laboratory

Technology transfer

The Savannah River National Laboratory (SRNL) is the U.S. Department of Energy's (DOE) applied research and development laboratory at the Savannah River Site (SRS).

With its wide spectrum and expertise in areas such as homeland security, hydrogen technology, materials, sensors, and environmental science, SRNL's cutting edge technology delivers high dividends to its customers.

The management and operating contractor for SRS and SRNL is Savannah River Nuclear Solutions, LLC. SRNS is responsible for transferring its technologies to the private sector so that these technologies may have the collateral benefit of enhancing U.S. economic competitiveness.

Partnering opportunities

SRNS invites interested companies with proven capabilities in this area of expertise to develop commercial applications for this process or product under a cooperative research and development agreement or licensing agreement. Interested companies will be requested to submit a business plan setting forth company qualifications, strategies, activities, and milestones for commercializing this invention. Qualifications should include past experience at bringing similar products to market, reasonable schedule for product launch, sufficient manufacturing capacity, established distribution networks, and evidence of sufficient financial resources for product development and launch.

SRNL-L7100-2012-00125



Savannah River National Laboratory[™]
OPERATED BY SAVANNAH RIVER NUCLEAR SOLUTIONS

The Savannah River Site and the Savannah River National Laboratory are owned by the U.S. Department of Energy, and are managed and operated by Savannah River Nuclear Solutions.