

Directed Spray Mast



Engineers at the Savannah River National Laboratory (SRNL) have developed a remotely-operated tank cleaning device for precise, high-pressure spray for use in limited access areas. The device offers features unavailable in tank cleaning technologies currently on the market, providing for better, faster and cost-effective tank cleaning.

Remotely operated tank-cleaning device

The directed spray mast was originally conceived to eliminate the inherent dangers involved with sending workers into storage or process tanks during cleaning operations. The directed spray mast was designed to provide more precise cleaning of problem build-up areas within a tank versus the more global cleaning approach of existing technologies.

at a glance

Versatile design

The design features of the directed spray mast provides for effective cleaning up to 20 feet away from the access point at pressures as high as 3,000 psi. Tank entry for the directed spray mast requires an access port of only three inches in diameter. In addition, this spray device has been effective in cleaning either hard or soft sludge buildup while requiring less water and electricity to accomplish the task.

- **U.S. patent 6,889,920 B2**
- **cleans with high precision**
- **operates at extremely high pressures**
- **fits through small tank-entry ports**
- **requires less water**
- **reduces electricity consumption**

SRNL-L9100-2009-00188

Many uses

This technology can be applied to any industry requiring a precise, high-pressure spray cleaning device with a limited access area. Some prospective areas of use would include slurry tanks for food processing; fermentation tanks for beverage manufacturing; paint and textile processing vessels; batch process tanks for chemical manufacturing; and hazardous waste storage tanks. This technology has been tested and deployed in the field for effective cleaning of evaporator tanks at the Savannah River Site (SRS).

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 enter into a licensing agreement with SRNS to manufacture and market this technology. 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.

for more information

Dale Haas, Commercialization Manager
Savannah River National Laboratory
Bldg. 773-41A, Rm. 238, Aiken, SC 29808
Phone: 803-725-4185
Fax: 803-725-4988
E-mail: dale.haas@srnl.doe.gov