

**FOR IMMEDIATE RELEASE**

July 18<sup>th</sup>, 2014

Media Contact: Patrick Olson

polson@fresystems.com

(651) 243-2520

## **VDK6000 Robotic Cell for Metal 3D Printing and Metal Part Refurbishing**

Flexible Robotics Environment, (FRE™) announces the creation of VDK6000 robotic metal 3D printing and repair work cell that automates refurbishing, rebuilding and/or creation of metal components utilizing subtractive and additive technology.



Six degree of freedom VDK6000 Robotic Center provides a unique, on the market, modular motion solution for advancing hybrid (additive and subtractive) manufacturing technology for creation and/or mending of complex metal parts.

VDK6000 thus satisfies a basic need to deploy most advanced metal printing and metal removal capabilities producing reliable and cost-effective solutions as an alternative for well-established reparation processes widely used in industry today.

This hybrid in additive and subtractive manufacturing robotic technology, was recently installed at a customer site with another delivery scheduled for September of this year.

VDK6000 is designed to provide multiple operations, on a single station, directly enabling production of “first time right” parts and their repair.

With 6 degree of freedom VDK6000, refurbishing of high-cost metal components is now a reality bringing about faster re-deployment at a lower overall cost.

Being an advanced manufacturing solution, VDK6000 offers an auto connect robotic tool-changer allowing integration with a combination of conventional and non-conventional processes such as: a) cold spray, b) milling, c) laser scanning, d) ultrasonic inspection, e) thermal spray, f) polishing, g) laser deposition/drilling, h) plasma-welding etc.

“This system is quite an achievement because it offers various combinations of subtractive and additive manufacturing, with a single system solution” said Dr. Vojislav Kalanovic, FRE’s President. “We continue to work with all our processing and military partners to deliver 3D metal printing solutions, as well as 3D repair solutions of existing metal parts thus addressing current challenges faced in the manufacturing world.”



FRE’s VDK6000 was built utilizing Aerotech’s motion components for all 6-axes. Thanks to the FRE’s inverse kinematics capabilities, axes are broken into a spatial placement having the best error minimization configuration for a given application. With a FRE approach, VDK6000 can be scaled up/down depending on the customer’s needs. System is controlled by an A4000 dual runtime hybrid

platform that is the best runtime platform on the market today. Path planning and processes definition are all completed in MoDusCAM™. This easy user interface is integrated directly in SolidWorks™ software.

About Flexible Robotic Environment:

Flexible Robotic Environment (FRE) is the world leader in modular robotics answering manufacturing challenges of today. FRE™ has patented robotic motion solutions and control systems used by industry to shape a workspace around a desired application. FRE offers: a path planning solution SolidWorks™ based application MoDusCAM™, A2 industrial PC controller, DDS 6-Axis Control cards, fast fire true 3D position based I/O cards, and customized HMI/Scada systems. MoDusCAM™ provides the fastest and easiest path planning on the market today. For more information about Flexible Robotic Environment, visit <http://www.fresystems.com>

Flexible Robotic Environment  
Division of Bicommerce LLC  
5305 Chateaux Ridge Court  
Rapid City, South Dakota 57702