Press Release

ABB Robotics - Lean Robotics for Lean Manufacturing

ABB features Robotic Retrieval and Transport (RAT) concept vehicle at the US Army's first Robotic Rodeo event

Event intended to find innovative robotic systems to support military operations

AUBURN HILLS, Mich. (September 9, 2009) – ABB Robotics, a leading global industrial robot manufacturer with North American headquarters in Auburn Hills, Michigan, participated in the US Army's first "Robotics Rodeo" August 31 – September 4, 2009 at Fort Hood, Texas. Fort Hood III Corps and the Army Tank Automotive Research, Development and Engineering Center (TARDEC) hosted the event, which brought together robotics experts and companies from across the country to find innovative robotic solutions and encourage the development of autonomous systems to support the military's operational needs and troops in combat.

ABB featured its Robotic Retrieval and Transport (RAT) concept vehicle in the Extravaganza portion of the event, which featured booths and demonstrations allowing government representatives and soldiers to review the latest innovations in robotic technology for potential military use. The Robotic RAT vehicle consists of an IRB 6620 industrial robot mounted to the flat bed of a specially equipped Ford F250 pick-up truck. The IRB 6620 is one of the strongest and most agile of ABB's line of robots typically used in manufacturing, material handling and numerous other industrial applications. The vehicle is able to traverse the rough, undulated terrain often found in desert locations. While the military procures unique robots specially designed for defense requirements, the ABB concept vehicle demonstrated COTS (commercially-off-the-shelf) robot and tool changer technologies to promote dual-use opportunities.

An Automated Tool Changer is mounted to the vehicle, allowing the robot to alternately engage a pallet handling gripper and a three-jaw general handling gripper. This allows the RAT vehicle to demonstrate two potential retrieval functions for the mobile robot: 1) picking, moving and placing supply pallets in a supply depot, and 2) handling empty metal gas canisters, meant to represent debris, spent shell casings, or IED's (Improvised Explosive Devices). For military

applications, mobile robots require a collection of interchangeable tools to be readily available on moving platforms much the same way manufacturing robot systems exchange tools for various work cell tasks.

The manipulator has a Vision Guidance System allowing it to automatically identify, locate and secure objects that have been programmed into the robot controller. Payload sensors developed in industrial applications help robots easily adjust the path and force to use when handling objects that vary in size, shape, weight and location.

"The ABB Robotic RAT concept vehicle will help demonstrate the potential of our proven industrial robotic technology to be adapted for a variety of military applications," said Erwin DiMalanta, Manager of Government & Defense Affairs, ABB Robotics, North America. "We are excited to be participating and hope to further our discussions with developers and defense firms."

The robotic rodeo is a market research event intended to evaluate robot technologies that could benefit the Army's robotics programs. Soldiers who have recently returned from combat will review and, where feasible, operate the equipment in order to provide input to developers on how the concepts can be refined and adapted to best serve the military in the execution of tasks that are often described as dull, dirty and dangerous. "It's all about saving lives. There's got to be a sense of urgency," said Lt. Gen. Rick Lynch, commanding general of III Corps and Fort Hood.

For more information on the Robotics Rodeo visit: www.tardec.info/roboticsrodeo/. For more information on ABB Robotics visit www.abb.com/robotics.

About ABB, Inc.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in approximately 100 countries and employs about 120,000 people.

About ABB Robotics

ABB Robotics (www.abb.com/robotics) is a leading supplier of industrial robots – also providing robot software, peripheral equipment, modular manufacturing cells and service for tasks such as welding, handling, assembly, painting and finishing, picking, packing, palletizing and machine tending. Key markets include automotive, plastics, metal fabrication, foundry, electronics, pharmaceutical and food and beverage industries. A strong solutions focus helps manufacturers improve productivity, product quality and worker safety. ABB has installed more than 160,000 robots worldwide.

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