



Rock Island Arsenal JMTC Brings Gold Shingo Prize to the Arsenal

Gale L. Smith

On Sept. 7, 2006, the Rock Island, IL, Arsenal Joint Manufacturing and Technology Center (RIA JMTC) made history by becoming the first Army organization ever to receive the Shingo Prize for Excellence in Manufacturing (Public Sector Award) at the Gold Level. *BusinessWeek* has referred to the award as the “Nobel Prize of Manufacturing,” because it establishes a standard for world-class excellence.

Soldiers from the 3rd Armored Cavalry Regiment provide security from their M1A1 Abrams main battle tank along a main supply route into Tal Afar, Iraq. The Forward Repair System produced by RIA JMTC is what keeps these tanks and other heavy equipment operating despite the harsh environment and operating conditions these weapons platforms are subjected to. (Photo by SSGT Jacob N. Bailey, U.S. Air Force, 1st Combat Camera Squadron.)



Then: The old process to grind and weld the FRS Flatrack was performed manually on saw horses and the operator needed to get in the right position. The operator was not able to move the weldment to the right height or ergonomic position. (Photo courtesy of RIA JMTC Lean Core Team.)



Now: The new grinding and welding process enables operators to use manipulators to easily rotate the weldment to the weld position and proper ergonomic height. (Photo courtesy of RIA JMTC Lean Core Team.)

At a ceremony in Las Vegas, NV, during the Second Annual Shingo Prize Public Sector Conference and Awards Ceremony, RIA JMTC Commander COL J.B. Elliott accepted the award for the RIA JMTC workforce and dedicated it to them. "I am honored to accept this on behalf of our workforce and their extraordinary efforts. Many of our workers have been working seven days a week — sacrificing weekends, holidays and vacations — to ensure mission success," he said. "Due to their efforts, we have dramatically improved our performance in providing our warfighters with the highest quality equipment, on or ahead of schedule and at a reduced cost."

Although RIA JMTC started its Lean journey in 2002, it took a major leap forward in early 2006 by restructuring and creating integrated product teams to

manage its products horizontally across the organization — a significant change from its traditional organizational structure. This resulted in the creation of the Focused Factory for the Forward Repair System (FRS) and led to dramatic improvements in its production that garnered them the Shingo prize.

FRS is a highly mobile, forward maintenance self-contained repair system that contains a generator, air compressor, 7-ton crane, welding and cutting equipment and more than 600 hand tools. Soldiers use FRS to repair Abrams tanks and other equipment in the field near the front lines. RIA JMTC is the sole producer of FRS. U.S. Army Materiel Command (AMC) Commanding General GEN Benjamin S. Griffin has said that "Nothing fielded has impacted Soldier morale more significantly than FRS."

By leveraging Lean Six Sigma, RIA JMTC increased its FRS production significantly from 4 to 29 per month, established one-piece flow, shortened travel distance by 81 percent, reduced manufacturing lead time by 40 percent and resolved 36 safety/ergonomic issues.

In a ceremony at the RIA JMTC manufacturing complex on Sept. 22, 2006, Griffin, Elliott and Shingo Prize Executive Director Dr. Ross Robson presented the award to the RIA JMTC workforce. Griffin said, "I will use you as an example — inside and outside of AMC — as an example of excellence. You're an elite group! Thank you for what you do!" Robson was equally congratulatory. "This is a celebration of an outstanding accomplishment — the first Gold Level Shingo Prize in the Army!"

In addition to the RIA JMTC, Elliott thanked some specific individuals including Science and Engineering Director David Bailey, who has been the Lead Champion for the last three years; Simpler Consulting Inc. senseis Tommy Thompson and Jim Little; Garrison Manager Alan Wilson; and the garrison support staff. Because of the award's prestige, the Shingo Prize further confirms RIA JMTC's world-class manufacturing status.



Then: The old process involved loading each individual tool from the rack/shelf into each drawer separately. The tools were not prepacked from the tool suppliers as they are today. (Photo courtesy of RIA JMTC Lean Core Team.)



Now: The tool loads are now preloaded as kits from the vendor. Workers load them directly into the drawers then load the drawers into the cabinet. (Photo courtesy of RIA JMTC Lean Core Team.)

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