

Watervliet's upgrade to shave up to 60 percent off production time

U.S. Army

WATERVLIET ARSENAL, N.Y. (April 2, 2013) -- The Watervliet Arsenal announced March 29, that it is testing two new high-tech machines that when fully operational in about two weeks will have the potential to reduce machining on select components by up to 60 percent, said Paul Nieckarz, an arsenal manufacturing foreman.

"These two machines are the first delivery of a nearly \$4 million upgrade to the arsenal's minor components manufacturing operation," Nieckarz said. "Each machine replaces 40-year-old technology that was required to machine precision components for 155mm howitzers and mortar systems."

The machines will not only enhance the arsenal's capability to expand its product line, they will also enhance the arsenal's capacity to meet the high demands of urgent orders for U.S. troops, Nieckarz said.

"With this new capability, we are moving from a machine that could only machine on one axis before a new set-up was required, to one that can machine on nine different axes," Nieckarz explained. "For example, a two-hour process to machine an 81mm base cap went from 120 minutes to about 24 minutes, a savings of about 60 percent."

Initial feedback from two arsenal machinists who are training on the new machines bodes well for the future of this new technology.

"Although there is a lot to learn about these machines, what I have seen so far excites me to think about the machining possibilities that we might achieve once these machines are fully operational," said Joey Zwack, an arsenal machinist.

"I have been here a long time and I never thought I would be able to run any machine as fast or as technologically advanced as these new machines, said twenty-year machinist Tom Ostrander echoing Zwack's comments. "These machines will make a huge difference in our ability to move product through quicker."

The new Mori Seiki machines not only can do precision cuts down to one micron, which is one millionth of a meter, but they can do so faster and with improved quality control. At the end of the day, the arsenal will improve its quality and its ability to machine parts quicker.

The latest two pieces of equipment are but two of five major equipment buys as part of a nearly \$4 million contract to improve machining on minor components for weapon systems. Because the arsenal cannot currently build new buildings to

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improve its capability, it must instead transform underutilized space and aging machinery to remain competitive in a tough defense manufacturing market.

Machine by machine, square foot by square foot, the arsenal is, through a program called the Capital Investment Program, methodically opening up floor space for high-tech manufacturing.

The Watervliet Arsenal is an Army-owned-and-operated manufacturing facility and is the oldest, continuously active arsenal in the U.S. It began operations during the War of 1812. It will celebrate its 200th anniversary this July.

Today's arsenal is relied upon by U.S. and foreign militaries to produce the most advanced, high-tech, high-powered weaponry for cannon, howitzer, and mortar systems. This National Historic Registered Landmark has an annual economic benefit to the local community in excess of \$100 million.

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