

Building a Solid Reputation

MIKE WERN is a lot like the machines he builds: solid, durable and dependable. It's his approach to manufacturing and the quality of his machines that earned Mike the **2014 Shot Peener of the Year** award from *The Shot Peener* magazine.

Mike is the President and owner of Engineered Abrasives® (EA®), a manufacturer of high-volume shot peening and blast cleaning machines in Alsip, Illinois (a Chicago suburb). Mike's father and grandfather started H&W Sandblast in 1935 and his father and uncle started Engineered Abrasives® in 1968. Mike began working for the company after school when he was eight years old. "Because I was so small, one of my jobs was crawling into Wheelabrator machines and cleaning them out," Mike said. He began working full-time at EA® after he graduated from high school. In 1983, he purchased the business from his family. At that time, EA® employees manufactured hand-blast cabinets and ran a small job shop.

Today, Engineered Abrasives® builds custom and turnkey systems for high-volume applications, including indexing and CNC shot peening machines, deburring machines, grit blasting machines, single cell machines and machines for peening with glass and ceramic bead. The company now has 62,000 sq. ft. of manufacturing space.

In addition, EA® is an ISO/TS 16949, ISO 14001 and Ford Q1 certified job shop, specializing in Ceramic Peening, Glass Bead Peening and Fine Steel® Peening—a process Mike developed for Ford Motor Company and General Motors. The job shop is also a testing facility for the eleven (11) EA® machines that run 24/7. The shot peening technicians test and validate EA® machine components to ensure that an EA® machine meets their customers' demanding production schedules. "No other manufacturer can make that claim," said Mike.

Engineered Abrasives® specializes in their patented rotary index machines

for customers in aerospace, appliance, medical, and heavy equipment, but the market EA® dominates is U.S. automotive. According to Mike, "We have built many of the shot peening machines for gears in the U.S.A. automotive industry and are the leading equipment supplier for component OEMs." For example, Mike delivered a machine that cleans the internal oil passages and the entire external surface of V6 aluminum engine blocks at an incredible speed of 90 engine blocks per hour. The rotary index machine, built to customer specifications, is 35 ft. tall and weighs over 20 tons. Engineered

Abrasives® recently designed and built a high-volume machine that peens the gear root radius and tooth faces of large rack and pinion gear sets (averaging 500 lb.) for bulldozers, excavators and other heavy-duty equipment.

Engineered Abrasives® machines have done more than build the company's reputation; they have advanced the validity of shot peening in the U.S. automotive industry. "Mike's machines are robust enough that they can work 24/7 and his control panels are so operator friendly that EA® gives shot peening a good reputation as a controllable,



Mike Wern stands by the control panel of an Engineered Abrasives® high-volume index unit with a material handling and robotic system. The machine incorporates EA's patented process to eliminate gear tooth pitting. It will be shipped to a plant in China that builds components for automobiles sold in China.

repeatable process,” said Jack Champaigne, Editor of *The Shot Peener*. Mike’s continual innovations in machine design, like the EA® Knowledge System®, enables machine operators to keep pace with increasingly sophisticated shop-floor technology. The EA® Knowledge System® features how-to computer animations on machine operation and maintenance and is available on all EA® machines.

It’s almost impossible to run a bad part in an Engineered Abrasives® machine due to the robustness of the equipment and its monitoring systems.

Heat Treat Engineer, Ford Motor Company

“The U.S. automotive industry is starting to believe in shot peening with air-blast machines and is shot peening more gears than ever,” said Mike. He believes the reason is because the new 8- and 10-speed transmissions have more gears. “The need to reduce the weight of the transmission and increase fuel economy is good for shot peening,” he added.

Engineered Abrasives® recently hired a distributor in China to expand and support their customer base in the Chinese automobile industry. “I want people to know that our machines are going into Chinese automotive plants that are building cars for the Chinese market. We aren’t building machines that will take jobs from the American automotive worker,” said Mike. The Chinese company has purchased EA®’s high-volume index units with material handling and robotic systems and their patented process to prevent gear tooth pitting.

EA® is sending a machine to an automotive manufacturer in Poland and the company has become adept at translating their documentation and signage into Chinese, Polish and Spanish (Mexico is another growing market for EA®).

Although Mike works hard to expand his business opportunities, he quietly gives back to the industry—even his competitors. “For years, Mike has sponsored a dinner reception at the annual EI Shot Peening Workshops that is attended by students, instructors and his competitors that exhibit at the event. Many years, Mike was too busy to attend the workshops, so he doesn’t do it for the attention. Giving back to others is just the kind of guy he is,” said Jack.

Erin Reardon, Mike’s daughter, was able to attend the award ceremony at the EI Shot Peening Workshop in Orlando this fall. “Dad built EA® into the business it is today, it wasn’t given to him, and it was great to see him get an award for all of those years of hard work.” Erin describes her father as a humble man that likes his employees and his vendors and has worked very hard to make the business successful.

While Mike doesn’t like to draw attention to himself, *The Shot Peener* magazine is pleased to recognize his work ethic and his shot peening machines that have helped give shot peening the place it deserves as a valuable process in the U.S. automotive industry. ●

Shot Peener of the Year Award

Since 1992, *The Shot Peener* magazine has given “The Shot Peener of the Year” award to individuals in our industry that have made significant contributions to the advancement of shot peening. We’ve listed the year of the award, the recipient and their place of employment at the time they received the award.

2014	Mike Wern	Engineered Abrasives®
2013	Scott Hatfield	Medtronic Spinal
2012	Hali Diep	Boeing Research and Technology
2011	James Kernan	U.S. Army Aviation and Missile Research, Development and Engineering Center
2010	Herb Tobben	Clemco Industries
2009	Michelle Bandini	Peen Service
2008	Holger Polanetzki	MTU Aero Engines
2007	Ken l’Anson	Progressive Technologies
2006	Kumar Balan Dr. John Cammett	Wheelabrator Group, Ontario Materials Engineering Division, Naval Aviation Depot
2005	Marsha Tufft Helmut Wohlfahrt	GE Aircraft Engines Technical University of Braunschweig
2004	Walter Beach Dr. Katsuji Tosha	Peening Technologies Meiji University
2003	Paul Prevey Dr. Niku-Lari	Lambda Research IITT International
2002	David Francis Shaker Meguid	Metal Improvement Company University of Toronto
2001	Dr. David Kirk Dale Lombardo Bill Miller	Coventry University, U.K. GE Aircraft Engines The Boeing Company
2000	Jonathan Clarke Lothar Wagner	Delta Air Lines Technical University of Brandenburg
1999	Andre Levers	British Aerospace Airbus
1998	Wolfgang Linnemann	Kugelstrahlzentrum Aachen
1997	Dr. R. Kopp	Institute Metal Forming of RWTH
1996	Dr. M.C. Sharma	Maulana Azad College of Technology
1995	Dr. Kisuke Iida	Meiji University
1994	Charlie Barrett	Metal Improvement Company
1993	Pete Bailey Bob Thompson Jim Whalen	GE Aircraft Engines GE Aircraft Engines GE Aircraft Engines
1992	Charlie Mason	Menasco Aerospace Ltd.