

2024 Shot Peener of the Year

Jack Champaigne

THE TIMING was ideal this year to celebrate Jack Champaigne’s standing in the shot peening community. Jack launched Electronics Inc. in 1974 and for the next 50 years, he has worked tirelessly to validate and support the shot peening industry. The following are a few of his pioneering contributions.

PRODUCTS

The MagnaValve. Jack’s first major product was the MagnaValve®. EI now produces five MagnaValves for air-blast machines and 15 for wheel-blast machines. The MagnaValve is used in at least 74 countries for shot peening and wheel blast applications. Additional valves are in development.



One of the earliest MagnaValves and controllers

Almen Strips and Gages. Thanks to Jack’s relentless pursuit of the best Almen strip on the market, EI’s Almen strips are the “industry standard” worldwide.

Jack also extended the EI Almen gage family to include an Aero Almen gage and the mini-strip gage.

Rotary Flapper Peening Products. Jack recognized the aerospace industry’s dependence on shot peening and began carrying the 3M rotary flap peening products because they are ideal for peening small areas on new or repaired parts. The success of these products were key in launching EI’s flapper peening training. More on that in the next section.

WORKSHOPS, SEMINARS, TRADE SHOWS, AND ON-SITE TRAINING

“A rising tide lifts all the boats” could well be Jack’s philosophy toward the shot peening community. (The quote is often contributed to John F. Kennedy.) Jack believed that educating product design managers, machine operators, foremen, supervisors, and maintenance and quality control engineers on how to do shot peening properly would elevate its position in manufacturing.

EI sponsored the first-ever annual Shot Peening and Blast Cleaning Workshop in 1991 in Atlanta, Georgia. From that time on, the shot peening industry became a more open, well-respected, and productive community.

EI continues to pick interesting and easily accessible locations in the USA for the workshops. Industry leaders are chosen as the instructors so participants gain practical knowledge they can take back to their facilities. Topics cover every aspect of shot peening, blast cleaning, and rotary flap peening.

EI Shot Peening Training now provides workshops, seminars and on-site instruction for military bases and companies worldwide.

Part of Jack’s marketing genius was that he knew elevating shot peening would sell more EI products, too. Trade shows featuring EI products and other industry leaders are held in every EI USA workshop.

CERTIFICATE OF ACHIEVEMENT PROGRAM

Students are encouraged to take an exam after the workshop to show their company that they have acquired competency in the course curriculum. This inspired Jack to



develop an Achievement Exam program. The Level I, II and III exams identify a higher level of shot peening performance for career advancement, spotlight the commitment of an organization to educational development, elevate professional standards, and promote the growth of qualified personnel throughout the industry. Almost 10,000 individuals have

received a certification via these programs and the certificates are now displayed in facilities across the world.

In 2001, Jack Champaign and Pete Bailey launched their unique on-site training program for the FAA—it was the first program of its kind and it was developed specifically for the FAA. The program was so well received that EI applied for and received designation as the only FAA-accepted source for shot peening inspector training. Aviation personnel enrolled in the FAA/AMT (Aviation Maintenance Technician) awards program and FAA auditors and inspectors could now receive credit toward their yearly FAA training requirement by taking EI's FAA-Accepted Courses and passing their Achievement Exam Program exams either through EI's workshops or on-site training programs.

Speaking of on-site training, EI also created on-site training for companies that want instruction on their own processes for a larger number of employees.

THE SHOT PEENER MAGAZINE

No one but Jack could foresee the need for a magazine for a niche market in the manufacturing world. *The Shot Peener* magazine started as four typewritten pages in 1987. EI used the magazine to sell its Almen strips and MagnaValves, and Jack invited other companies to promote their products. *The Shot Peener* covers topics of importance to a wide range of readers — from OEMs to engineers to academics to machine operators—and is distributed to over 76 countries.



The first Shot Peener magazine was published in July, 1987

SHOT PEENER OF THE YEAR AWARD

In another novel effort to elevate shot peening, as Editor of *The Shot Peener* magazine, Jack created the “Shot Peener of the Year” award in 1992. Every year since then, the magazine has given the award to individuals in the industry that have made significant contributions to the advancement of shot peening. (Visit www.theshotpeenermagazine.com for a complete list of recipients.)

PATENTS

The MagnaValve hasn't been Jack's only innovation—he along with other EI engineers have contributed to over 30 patents. He is developing patented processes and products to this day.

ONLINE LIBRARY (www.shotpeener.com)

Jack is a seeker of information and to hold his vast number of papers and articles, he introduced the first online library devoted to metal surface enhancement in 1995. In addition to the online library, the website includes current news, a Q & A Forum, Tools, and a Buyer's Guide.

INDUSTRY ORGANIZATIONS

Jack has also contributed to the advancement of shot peening by volunteering his time to the International Committee on Shot Peening, the Surface Enhancement Division of Society of Automotive Engineers (SAE), and the Aerospace Metals Engineering Committee (AMEC) of the Aerospace Materials Division of the Society of Automotive Engineers. Mr. Champaign was appointed Chairman of the International Scientific Committee on Shot Peening (ISCSP) in 1996 and was the host of the Sixth International Conference on Shot Peening held in San Francisco, California. He was also the ISCSP Chairman and host of the Eleventh International Conference on Shot Peening in 2011 when the conference was held in South Bend, Indiana. ●

“My career is full of serendipities. It's hard to believe that my first 50 years at Electronics Inc. is here. The next 50 years should be just as exciting. My work with Wheelabrator in 1979 led to controls and valves for Boeing peen forming. After we satisfied the need for air pollution controls, I dedicated my efforts to valves and controls for shot peening applications. The first workshop in Atlanta in 1991 then led to on-site training opportunities in the US and foreign countries. Step by step the story unfolded—*The Shot Peener* magazine, the web site www.shotpeener.com, participation in the International Scientific Committee, and the SAE committees. It all blurs; it past too fast. As the market started to expand we added distributors in foreign countries (now over 20). The future wasn't clear but I sensed that surface integrity was a large opportunity for growth. I am so grateful for all of the wonderful people I have had the privilege to work with, especially Prof. Dr. David Kirk who has now retired. We will dedicate a future issue of *The Shot Peener* magazine to his legacy.”

—Jack Champaign