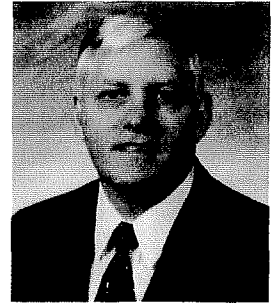


The Parting Shot Jack Champaigne

The Sharing of Knowledge



There is an universal need to share knowledge and grow as witnessed by a large and diverse group of attendees and exhibitors at the first annual European Shot Peening Workshop. Thirteen countries were represented at the workshop including one student from as far as New York, USA.

The faculty, staff and exhibitors successfully met the challenge to provide information on the current methods and developing trends in our industry. The workshop covered the practical aspects of shot peening and theoretical topics. We were especially pleased that Dr. Volker Schulze, the chairman of the International Scientific Committee on Shot Peening and the chair of the next International Conference on Shot Peening to be held in Paris in 2005, was able to join us for a technical presentation "Surface Characteristics and Fatigue Properties after Shot Peening". He also gave a keynote address about future trends in shot peening. Industry leaders from the US and Europe joined Dr. Schulze in providing a full two days of intensive instruction. The majority of students stayed after the conclusion of the seminars for the optional shot peening proficiency exam (all passed).

During the workshop and visits to German companies, we learned that it is common practice in Europe (especially in the automotive industry) to specify the stress profile to be achieved by peening rather than the intensity and coverage. Almen strips are used to help set up the process and verify machine performance. The main objective is to get a particular stress profile that will satisfy a fatigue requirement. We saw this practice on new equipment purchases and job shop outsourcing.

So the search for knowledge and its evolution is evidenced in commercial and academic venues—as process specifications are being tested and revised to meet the needs of a particular industry (the European automotive industry), academic resources are being expanded in the United States. The establishment of a shot peening center at Purdue University school of Mechanical Engineering Technology will now offer many opportunities for research and development as well as specialized training needed for shot peening process control. Professor Christine Corum has started several projects at Purdue. One effort is to establish the correlation of media sieve analysis with computer generated image analysis for shot size and shape inspections.

This effort is sponsored by W. S. Tyler in Mentor, Ohio (www.wstyler.com). Corum has also introduced

peening practice into the student laboratory sessions regarding cyclic fatigue and failure analysis. Other projects, such as nozzle efficiency, computer generated Almen saturation curves, coverage inspection, non-destructive testing are in the wings waiting for industrial partners to help co-sponsor the work. Contact Professor Corum at clorum@tech.purdue.edu.

Other than academia, where else do we get our guidance and promotion for shot peening? Two strong sources come to mind. One is AMEC, The SAE Aerospace Materials Engineering Committee, which has just elected Al Patterson of Lockheed Martin Marietta as its new chairman. If you would like to become involved in this SAE committee contact Al at a.patterson@lmco.com. They meet five times during the year, usually on the West Coast. The other strong influence for shot peening, undeniably, is Metal Improvement Company. Headquartered in Paramus, New Jersey, this subsidiary of Curtis Wright has been, and continues to be, the pioneer in shot peening. They wrote the book (get a copy at their web site www.metalimprovement.com). Much of the credit for the commercialization of shot peening can be attributed to Mr. James Daly, Senior Vice President of Operations. Jim is retiring in July of this year and many in the industry will miss his active involvement. Jim has been active in creating and improving many of the SAE shot peening specifications and recommended practices.



Jim Daly, Senior Vice President of Operations, Metal Improvement Co.

Do you want to learn more about the history and future of shot peening? The Shot Peening Universe web site (www.shotpeener.com) has articles on the history of shot peening. Review the bulletin boards at the web site on numerous subjects and follow the dialogue between colleagues from around the world. Join the online network—it is a unique opportunity to ask questions, share information, and get insight from people, just like you, that are continually expanding the processes and potential of shot peening and blast cleaning. Hundreds of US Patents in pdf file format are also available to download for free from the web site. And to tap the greatest wealth of knowledge available in one place, make plans to come to the 13th Annual Shot Peening and Blast Cleaning workshop in Scottsdale, Arizona.