



**Welding for the Strength of America**

*The Campaign for the American Welding Society Foundation*

# Testimony

**of Monica Pfarr**

Corporate Director, Workforce Development  
American Welding Society Foundation

*before the* Senate Subcommittee on Competitiveness, Innovation and Export  
Promotion

*on* Promoting American Competitiveness:

Filling Jobs Today and Training Workers for Tomorrow

April 17, 2012

**Comments of the American Welding Society**

**Before the**

**Senate Subcommittee on Competitiveness, Innovation and Export Promotion**

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Senator Klobuchar, Ranking Member Blunt and members of the Subcommittee, thank you for the opportunity to testify on behalf of the American Welding Society at this Senate Subcommittee hearing on Promoting American Competitiveness: Filling Jobs Today and Training Workers for Tomorrow.

My name is Monica Pfarr, and I am the Corporate Director for Workforce Development for the American Welding Society. Our organization of 70,000 members has a mission to advance the science, technology and application of welding and allied joining and cutting processes, including brazing, soldering and thermal spraying. Through our AWS Foundation, established in 1989, we support programs that ensure the growth and development of the welding industry through strengthening research and educational opportunities in welding and related industries. We collaborate with other organizations, including the Weld-Ed Center, funded by the National Science Foundation's Advanced Technological Education program, to complete our workforce research and outreach.

Welding, the fusing of the surfaces of two workpieces to form one, is a precise, reliable, cost-effective, and "high tech" method for joining materials. No other technique is as widely used by manufacturers to join metals and alloys efficiently and to add value to their products. Most of the familiar objects in modern society, from buildings and bridges, to vehicles, computers, and medical devices, could not be produced without the use of welding.

Welding goes well beyond the bounds of its simple description. Welding today is applied to a wide variety of materials and products, using such advanced technologies as

lasers and plasma arcs. The future of welding holds even greater promise as methods are devised for joining dissimilar and non-metallic materials, and for creating products of innovative shapes and designs.

The common perception for over a decade has been that welding, and U.S. manufacturing in general is dying. Let me point out some facts that may help change that perception:

- The United States is the world's largest manufacturing economy, producing 21 percent of global manufactured products;
- Over 90 percent of the total U.S. durable goods manufacturing uses welding as a critical enabling technology;
- Welding-related occupations provide employment for 986,000 individuals in the U.S.

Despite being an important part of the U.S. economy, like manufacturing, the welding industry is faced with some serious challenges:

- The average welding professional in the U.S. is 56 years of age;
- There is a need for 238,000 new and replacement workers by 2019;
- There is a misperception that welding is a dying industry with no future for those that choose the field.

Almost daily, newspapers and news broadcasts all across the nation report very similar headlines – “Employers are hiring welding professionals”; “Employers cannot find the skilled welders they need”; “Employers offer signing bonuses to qualified welding new hires”. These

headlines showcase both the positive and negative landscape within our industry.

The U.S. economy is improving, evidenced by the growth we are seeing in hiring. But the lack of skilled applicants is threatening to derail this growth. The lack of skilled applicants is a challenge we must address, and the American Welding Society is committed to take a leading role.

Through our workforce development efforts, the American Welding Society is engaged in educational outreach to youth, their parents, transitioning workers, and even teachers and career counselors. We have numerous programs designed to engage and educate this target audience about the many advanced and high-tech career opportunities available throughout the welding industry.

One of our most recent and highly visible projects is the “Careers in Welding” trailer, a 53 foot single expandable trailer with 650 square feet of exhibit space. Jointly sponsored by the American Welding Society and Lincoln Electric, it contains five Lincoln VRTEX 360 virtual reality arc welding simulators. These units feed computer generated data with a virtual welding gun and helmet equipped with internal monitors. Participants practice arc welding in a virtual environment. A video gaming component awards each “weld” a score. Additionally, the trailer contains interactive educational exhibits including a display wall featuring eleven industry segments that use welding, fun facts about welding, industry artifacts, and tablets with welding trivia questions. The career wall displays the many career pathways available in welding, along with the education required, associated industry certifications, and potential salary ranges. The “Day in the Life of a Welder” exhibit contains videos depicting real-life environments in which welders work. A life-size welder wearing personal protective equipment highlights welding as a safe profession. And, the scholarship wall details information about the almost \$400,000 in scholarships awarded annually by the American Welding Society Foundation.

The trailer was built by MRA Experiential Tours located in Madison Heights, Michigan. MRA hired two welding technology interns from nearby Washtenaw Community College in Ann Arbor, Michigan to work on building the trailer. In addition to the invaluable industry work experience, each student received a \$500 scholarship and are interviewed in a video featured inside the trailer.

The "Careers in Welding" trailer debuted in October, 2011 at the FFA National Conference where over 5,000 students virtually welded in 2 ½ days. The trailer embarks on a twenty week tour this May exhibiting at events including the Indianapolis 500, youth organizations like FFA and Skills USA, farm shows, air shows, and several state fairs including Texas, New York, Ohio, and Iowa.

Another exciting and recent achievement was the approval of a Boy Scouts welding merit badge. The American Welding Society and its dedicated volunteers were instrumental in the development of the badge, approved by the Boys Scouts in Fall, 2011. The welding badge is part of the Boy Scouts new science, technology, engineering, and math (STEM) curriculum, designed to help scouts develop critical skills that are relevant and necessary in today's competitive world. Requirements include learning welding safety and designing and completing a welding project. The first scouts were awarded the badge in March, 2012.

The American Welding Society is the leader in certification programs that assist industry in identifying qualified welding personnel and provide opportunities for welding professionals to demonstrate their qualifications to the welding industry. Currently, over 30,000 individuals hold an AWS certification. Some of our certifications require industry work experience while others can be aligned directly with educational programs and integrated into high school and community college degree programs of study. This integration allows an individual to achieve a portable, industry-recognized certification in addition to his/her education. Many of our certifications are stackable, and thus offer opportunities for advancement in education and within the industry.

The American Welding Society is collaborating with NAM and other national organizations to promote nationally portable, industry-recognized credentials within the manufacturing education and industry arenas. We believe this approach will help address the skills shortage.

In conclusion, the American Welding Society and its members are committed to engaging and educating the next generation of welding professionals. We are focused on providing skilled, certified applicants for the employers of our industry.

We look forward to working with all of you as we continue these critical efforts.

Thank you for the opportunity to testify today.