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AWS Promotes Diversity

AWS values diversity, advocates equitable and inclusive practices, and engages its members and stakeholders in establishing a culture in the welding community that welcomes, learns from, and celebrates differences among people. AWS recognizes that a commitment to diversity, equity, and inclusion is essential to achieving excellence for the Association, its members, and employees.

WELDING JOURNAL / DECEMBER 2020
More Than 100 Years of Safety Practices

Safety and health teachings have been part of the American Welding Society (AWS) since its very beginning. In its first publication, *Journal of the American Welding Society*, released in October 1919, there was an article titled “Safe Practices for Gas Welding and Cutting Equipment.”

Then, in January 1922, the first edition of *Proceedings of the American Welding Society*, Vol. 1, No. 1, which would become the *Welding Journal*, was published. That publication featured several articles on safety and health. One was “Safeguarding the Oxy-Acetylene Process” by J. L. Banash. The other was “A Paint That Will Not Reflect Ultra Violet Rays” by W. S. Andrews. The AWS has followed the example of those safety pioneers ever since.

Fact Sheets Support Safety

The AWS Safety and Health Committee has created more than 40 Safety and Health Fact Sheets on a wide range of subjects. The topics are as follows:

1. Fumes and Gases
2. Radiation
3. Noise
4. Chromium and Nickel in Welding Fume
5. Electrical Hazards
6. Fire and Explosion Prevention
7. Burn Protection
8. Mechanical Hazards
9. Tripping and Falling
10. Falling Objects

These Fact Sheets can be freely downloaded from awso.org/standards/page/safety-health-fact-sheets. The Fact Sheets were written for the welding operator. The documents can be used for toolbox safety talks, teaching aids, personal use, and more. These Fact Sheets are periodically revised and updated. Contact AWS Safety and Health Secretary Steve Hedrick (steveh@aws.org) if you have a suggestion for another Fact Sheet.

ANSI Z49.1 Offers Additional Protection Practices

Additionally, available from the AWS website is a free download of American National Standards Institute (ANSI) Z49.1, *Safety in Welding, Cutting, and Allied Processes*. This document has been published by AWS since World War II and is considered the Old Testament of welding safety. The U.S. Occupational Safety and Health Administration adapted its teachings in the *Code of Federal Regulations*, 29 CFR 1910 Subpart Q, Welding, Cutting, and Brazing.

Stay safe; follow the safe practices taught by the AWS.
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The COVID-19 pandemic has differing impacts on businesses of all types across all industries. In the manufacturing space, specifically, it has influenced changes in the supply chain, put extra pressure on suppliers and partners, and prompted operations to take a close look at health and safety protocols to ensure those practices are aligning with the findings and advice of medical experts — Fig. 1.

As a result, companies have had to quickly adapt to an ever-changing COVID-19 environment. This article highlights factors that allowed companies to endure the impact of the pandemic, the importance of investing in technology that enhances employee safety and productivity, and employee training for the future.

Factors That Enabled Companies to Endure the Tough Times

The companies that have been most successful in handling safety and health considerations to keep operations running during the pandemic were prepared to react quickly and thoroughly from the start. Some of the factors that positioned businesses well to weather the initial months of the pandemic include the following:

• Having extra inventory of sanitation materials and personal protective equipment (PPE). This includes products like hand sanitizer, disinfecting cleaners, and face masks. Organizations that were stocked up for the traditional flu season benefit-

Fig. 1 — The COVID-19 pandemic has prompted manufacturers to bring a laser-like focus on safety, personal protective equipment, sanitization, and personal hygiene in the workplace. Pictured is a Kapco Metal Stamping employee handing out face masks amidst the COVID-19 pandemic.
ted from being prepared. However, as all companies operate under this new normal for an unknown period of time, it is best practice to make sure your company is well stocked with sanitization and safety materials. Other sanitation practices that companies embraced include spacing shift changes by at least 30 min to ensure the entire facility — shops, equipment, bathrooms, and lunchrooms — can be properly disinfected.

• Acting quickly and appropriately. When medical experts and epidemiologists make recommendations, companies should react appropriately, even when those recommendations change with new information — Fig. 2. There is certainly a significant cost associated with making hard decisions that change the norm of an operating environment. However, companies that reacted quickly to the facts and information related to the pandemic made difficult choices, such as discontinuing in-person department meetings, customer and vendor visits, and travel between internal offices and business sites. Those interactions continued virtually unless absolutely necessary, in which case appropriate mask wearing and social distancing guidelines were followed. Employees in the industry who were able to get their jobs done remotely embraced the work-from-home norm. Meanwhile, those skilled workers responsible for the welding and manufacture of many of the products that companies produce were supplied with face masks and PPE while social distancing mandates were enacted — Fig. 3.

• Maintaining a diverse set of skilled workers. Organizations with a diverse skill range of welders were able to react swiftly at the onset of the pandemic. Take for example an organization that may have seen initial demand changes when the full realization of the pandemic’s impact took hold. By having welders with a diverse skill range, organizations can toggle output capacity without significant layoffs due to the variety of roles and responsibilities within their staff. Less experienced welders can operate welding robots while more experienced welders can assist those team members with robot setups, programming, inspections, and quality control. Additionally, the most experienced and skilled welders can continue executing manual welding work. That skill balance affords the flexibility to right-size to meet demand without having to change employment levels or adjust hiring practices, even during times of great uncertainty.

Investing in Employee Safety and Productivity through Technology

In typical times, it was already easy to trace the investment of new tech-
nology and equipment to improved employee safety and increased efficiency and productivity. To have the organizational mindset and leadership buy-in that adding new technology is more than just about the financial investment can be a key difference maker in developing a corporate culture that is focused on excellence. It also shows employees that the organization wants them to have the very best tools at their disposal.

Just before and during the COVID-19 pandemic, Kapco Metal Stamping (kapcoinc.com), a family-owned fabrication and stamping company located in Grafton, Wis., actively invested in a suite of welding technology. Each year, the company sees 80-million lb of metal through its facilities and performs cutting, forming, joining, and finishing of sheet and tube into numerous products. The company’s investment in technology played a pivotal role in it being able to maintain production demand while also keeping the welding team safe, socially distanced, and healthy — Fig. 4.

Some of that equipment included a pair of aluminum welding robots with servo torches. These machines have minimized welders’ exposure to fumes and physical repetitions, while also improving quality consistency and production rates. These robots feature touch-sense capabilities that detect any missing parts, which can eventually lead to expensive fixture repairs if not caught immediately, not to mention rework for the welding team.

Another intelligent welding system provides preset programs to keep the company compliant with customers’ requirements and ISO standards. It also monitors arc-on time status and wire usage. From a spot welding perspective, added bowl feeders and dual-palm buttons helped the company make improvements to pinch-point safety and cycle times.

The other thing that should be invested is time. Organizations that are serious about safety should perform daily safety audits to make sure employees are using their company-provided protective equipment properly while following corporate safety guidelines.

While you may look at that kind of investment and think, “What does that have to do with keeping my weld team safe, healthy, and productive as it relates to COVID-19?” These investments can help keep the team fresh and focused. New technology and safety audits can help take the taxing, day-to-day demands of their work off their shoulders so they can spend their energy delivering quality work while also keeping health and safety protocols top of mind.

**Training for Now, Training for the Future**

As demand for manufacturing has rebounded, especially as manufacturers look to source parts and components domestically, it has prompted many organizations to hire new welders and robot operators. While recruiting and retaining employees is a challenge in and of itself, getting those new hires in the door and trained is pivotal for guiding their success as good employees. It is also important for making a new hire a safe and responsible team member in the current COVID-19 environment that all organizations are navigating.

Manufacturers should have robust
safety training in place as well as a culture around safety excellence. New welder training should consist of at least a week-long welding technology and technique class for all new hires immediately after corporate orientation, regardless of experience level. In addition, if possible, organizations dedicated to continuing excellence should have an onsite welding trainer who offers personalized instruction for aluminum and steel; gas metal and gas tungsten arc welding; and specific equipment training. It’s also a good practice to offer reimbursement for American Welding Society Certified Welding Inspector (CWI) and Certified Welding Educator (CWE) seminars; other training and testing; and designated, paid study time with experienced CWIs on staff. This doesn’t just go for manual welders. All robot technicians and engineers should have basic and advanced training in robotic systems covered.

Having a welding team that is trained to thrive will help to establish a culture of excellence for safety, as well as productivity and quality.

Conclusion

While the COVID-19 pandemic is still evolving, we as manufacturers and welding providers can come together to help organizations strive toward keeping employees healthy and business strong.

That all starts with listening to experts and respecting the science of what is known about the virus. If and when new information comes to light, have a conversation with your team about how any additional findings can be dealt with and what practices and policies may be appropriate.

Meanwhile, when it comes to having a robust inventory of sanitation products and PPE on hand, if you need it, it’s too late. If this pandemic has taught us anything, it’s to always be prepared with even the most basic health and safety equipment — from hand sanitizers to face masks.

Furthermore, if your organization is considering an investment in new technology and machinery, the pandemic may have pushed that possibility to the forefront. Even if your bottom line took a hit, big or small, this is the time to make investments in improvement. Not only could it help employees work safer and smarter, it could also allow them to focus more of their energy on following health protocols and eliminating the potential risk for a COVID-19 outbreak in the facility.

Finally, there’s never been a better time to hit refresh on training. Are you requiring all new welders, regardless of experience, to take mandatory training? Are you footing the bill for skills development and training? Might it be time to bring on a full-time trainer to provide individualized coaching and training? Or are there other potential holes in your program?

Now is the time to update those practices. Trained employees work smarter, produce better, stay at your organization longer, and help instill a culture of excellence.

JERRY ZIEGENBEIN (ziegenbein@kapcoinc.com) is director of weld operations, Kapco Metal Stamping, Grafton, Wis.
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