Workplace Safety

Electrical Safety in Manufacturing: Debunking Myths Around Arc Flashes

Better MRO Editors | Mar 27, 2025

Despite extensive regulations and guidance from the Occupational Safety and Health Administration, the National Fire Protection Association and other safety organizations, myths and misconceptions about electrical safety persist—and they may be putting your workers in harm's way.

An expert from ***Oberon*** shares three essential truths about arc flash rescue devices, personal protective equipment (PPE) and incident energy reviews to help ensure your team stays safe.

Truth #1: There's a Safer, More Reliable Rescue Option Than the "Shepherd's Hook"

Myth: The traditional rescue hook, or "shepherd's hook," is the only viable option for rescuing workers from arc flash incidents.

Truth: Although the shepherd's hook has been the standard for decades, it is not always readily available—and in emergencies, that can cost lives.

> **"When employees know leadership has done the research and selected proven, tested PPE, they feel safer and more confident in their work environment."**
> Melissa Wasson
> Oberon

"When there's no shepherd's hook nearby, people resort to makeshift rescue tactics—kicking a person away from danger or using a garbage can to move them," says Melissa Wasson, product manager at Oberon. "That's just not a reliable or safe approach."

To address this gap, Oberon developed a patented ***escape strap***, designed to integrate directly with arc flash suits or over-suit vests. This figure-eight design is a continuous loop that crisscrosses the torso like a harness and enables a safely positioned co-worker to quickly pull the individual out of harm's way.

Unlike traditional rescue hooks, which require annual maintenance and recertification, Oberon's rescue straps are durable, practical and low maintenance. "Our testing shows the strap withstands up to 3,500 pounds of force before arc flash exposure and 3,000 pounds after," Wasson notes. "It's a much easier and more reliable rescue solution."

Read more: 5 Arc Flash Safety and Injury Prevention Tips for Manufacturing

Truth #2: Arc Flash PPE Can Protect Against Energy Levels Above 40 cal/cm^2

Myth: No PPE can protect workers from arc blasts exceeding 40 calories per centimeter squared (cal/cm^2).

Truth: Modern PPE is rigorously tested and capable of protecting against arc flashes well beyond this threshold.

"There are no documented fatalities of workers wearing the appropriate PPE during an arc flash," Wasson emphasizes. "Today's technologies have evolved to offer significantly higher protection. It is important to remember that blast pressure is not directly proportional to the calculated incident energy level."

In fact, arc-rated PPE is now commercially available with ratings up to ***140 cal/cm^2***. Many workers, however, remain unaware of this. "It's critical for employers to educate staff about the availability and effectiveness of high-rated PPE," Wasson says. "When employees know leadership has done the research and selected proven, tested PPE, they feel safer and more confident in their work environment."

Read more: The Development of Arc Flash Suit Fabrics: Flame-Resistant PPE for Electrical Hazards

Truth #3: Incident Energy Reviews Are Necessary, Even Without System Changes

Myth: If your electrical distribution system hasn't changed, you don't need to reassess incident energy levels.

Truth: ***NFPA 70E***, the Standard for Electrical Safety in the Workplace, specifies that arc flash hazard assessments must be reviewed at least every five years, even if no system changes have occurred.

"People often remember the part about not needing reevaluation if nothing's changed, but they overlook the five-year review requirement," Wasson says. "A lot can change over that time, including PPE standards, available technology and safer solutions."

For employers seeking guidance, ***SureWerx Technical Services*** offers support with hazard assessments, ***safety audits***, PPE evaluations, engineering and training. "Our team brings deep expertise in electrical standards and can help clarify complex requirements," Wasson adds.

What truths about electrical safety have made a difference at your facility? Share your experience in the comments.

