



# The Importance of Remaining Vigilant

**In 2014, Westex held a live flash fire demonstration at Texas A&M's state-of-the-art testing facility. This year's lineup included NFPA 2112 experts, burn unit specialists and some of the most realistic flash fire tests ever performed. SmartBrief, the leading online publisher of targeted business news, had the opportunity to hear firsthand accounts of real-life flash fire incidents. The takeaway was eye-opening — insights were uncovered that demonstrate the importance of events like this when it comes to educating the industry on the significance of FR safety. Read the following article that resulted from our conversations with safety professionals just like you.**

On a chilly September day in 1991, Brad Livingston was given an assignment to weld shut two pinhole leaks in a tank on a well in the Oklahoma panhandle. It was a routine job he and his senior welder had done many times before. And that was the problem.

"You're not thinking about the potential danger, and that means you're complacent," Livingston said. "When you go along and nothing goes wrong, you stop thinking about risk."

Livingston's company, like many, frowned on overtime. Livingston didn't want to speak up when his partner suggested they take the well supervisor at his word about the amount of oil in the tank and decline testing it on their own.

"The liquid level was not what we were told," he said. "We could have found that out in minutes and we didn't, in order to save a few minutes or maybe a few dollars."

His senior welder — a husband, father, grandfather — didn't survive the first explosion. Livingston remembers being hit by a fireball and launched in the air before landing on the second tank. His clothes were on fire and he was engulfed in flames. Then the second tank exploded, sending him into the air again before he hit the ground.

**“I was in good shape — a runner, 32 years old, but the heat took all my strength,” he said. “I could only roll three times...I prayed on the way to the hospital, and saying ‘Amen’ is the last thing I remember for two-and-a-half months.”**

Livingston sustained second- and third-degree burns on over 63% of his body, leaving him unable to breathe on his own, and unable to hug his three daughters, like many patients Jamie Heffernan sees on a daily basis.

Heffernan is a nurse manager at the University of Texas Medical Branch's Blocker Burn Unit. She can look at patients' burn patterns and know who was wearing protective clothing. “All fire-resistant clothing is not the same,” she said.

FR clothing will not ignite and continue to burn, but that doesn't mean it is truly providing adequate protection. There are huge differences among fabrics and garments that are compliant to NFPA 2112, because a fabric that records 50% or less body burn in a three-second flash passes. Unfortunately, some safety people will allow anything that complies, meaning they never consider the very large performance differences, or differences

in durability of flame resistance, shrinkage, comfort and other relevant properties.

“It shocks and disgusts me that something that will burn someone on 49.9% of their body is allowed,” Heffernan said. “That is not protection.”

Above 20% burn, the body reaction can become a bigger risk than the injury itself, as a result of body-wide systemic response. Treating the surface wounds often becomes secondary to controlling internal reactions. Otherwise, patients can die within five days from multi-organ failure.

For those who survive, burn treatment can last a lifetime and involves inpatient and outpatient surgeries, rehabilitation, and often, psychological treatment. “What many people don't know,” Heffernan said, “is that 30% of people have debilitating post-traumatic stress disorder after being burned.”

Livingston tells his story often. He wasn't supposed to live through the night, much less walk again. But his life changed on that day 23 years ago, and he makes it a point to tell people that taking shortcuts with safety is never worth it. Flammable clothing is never acceptable where there is any risk of flash fire, and cotton clothing is no upgrade at all over clothing that melts. He urges people to demand high-quality, market-proven FR clothing, and to wear it daily, because you never know when you will need it.

“Success is never measured by dollars,” he said. “Success is going home filthy, dirty, dog-tired, but home.”

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