



Burn survivors Pat Stamp and Peter Clark shared their stories of surviving flash fires at a meeting in St. John's in June. • L-R: Pat Stamp, Peter Clark and Madonna Stamp  
Photo courtesy of Pat and Madonna Stamp.

# Learning from Loss

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"I had a gut feeling when I went on board that Thursday that something wasn't right and I didn't know what it was. I couldn't put a finger on it," recalls Pat Stamp.

That Thursday was April 8, 2006, the day a workplace accident would change his life forever. Stamp was a welder sent to complete work onboard a shuttle tanker in Conception Bay. Along with tanker deckhand, Wayne Dalton, Stamp entered tank number five to begin welding repairs, descending the staircase to the bottom of the tank some 65 feet below. Men in the adjacent number six tank were doing repair work on a hydraulic line, a process which allowed fluids and fumes into number five tank.

"When I struck the arc I felt a hot breeze blow across my throat. I stood up and I said to Wayne, have you felt anything, and he said no. I said, I haven't learned this in a textbook anywhere, but I'm almost sure this tank is flashed."

Stamp says he then saw a heat wave about three feet above the deck traveling ahead of him towards the ladder. The sludge in the stairway soon ignited. He convinced Dalton that they had to leave. They began making their way towards the ladder through intense heat and darkness (the only pocket of light coming from a 16-inch diameter hole above them).

"I slipped, he ran past me and kept going toward the ladder. By the time I got to the ladder there was no sign of Wayne. I took a deep breath, closed my eyes and started climbing. I ran into Wayne about two thirds up and I stopped to get a breath of air and I couldn't. It was so hot that I felt it burn right down through my system. I looked behind me to see what was happening. The fire was just about burned out but the tank was filling with heavy black smoke. At that time I had no air, I was very hot and I said, I will die here. I was going to lock my legs into the rungs of the ladder and I said, they will find me here. I knew nothing until I ran into Wayne again."

Dalton told Stamp that he had climbed up too far. Stamp then realized that there was a landing right at foot level so he crossed over to go up through the opening and called to his friend to follow. Unfortunately, Stamp became stuck in the opening. Dalton decided to go back down the ladder.

"I yelled up to the men who were standing on the deck and said, I'm stuck. They never moved. They were just standing there frozen. I thought for sure that I was going to be burnt off from the waist down. I couldn't get out. And my six month-old grandson appeared about 25 feet ahead of me. His whole life flashed. I saw my grandkids grow up. And I pushed as hard as I could and was thrown out on the deck."

Believing that he was on fire, Stamp rolled on the deck and asked those on deck to go help Dalton. They told him that he was not on fire so he stood up and ran to the side of the ship, thinking that it was about to explode. The men then convinced him to go to the first aid room where Stamp began cutting off his own clothes, exposing giant blisters on his legs. His welding cap was burnt like a marshmallow to the top of his head.

Still not realizing the severity of his condition, Stamp called his wife Madonna to tell her that he was hurt but was okay and waiting to be airlifted to the hospital in St. John's. While waiting for the helicopter to arrive, Stamp was looking into a mirror watching his face become green and unrecognizable. Shortly after doctors arrived, Stamp went into shock. He woke from a drug-induced coma seven weeks later.

Wayne Dalton's body was later recovered. He died of smoke inhalation.

A Transportation Safety Board investigation later revealed that a combination of factors led to the accident that claimed Wayne Dalton's life and left Pat Stamp with burns to 30-40% of his body. The board says the fire likely occurred when combustible vapours from the back-flowing of oil/water mixture that had entered the workspace were ignited by the welder's arc.

### **One Man's Journey**

Like Stamp, Peter Clark knows all too well the devastating effects of being caught in a flash fire. Clark, Vice President of Training, Research & Development for Apparel Solutions International, has a passion for safety stemming from his own accident in 1979. Clark says he chose not to work in the Alberta oil patch at the time because he thought it was too dangerous.

"So I worked this other job and got burnt from simply working around this pipeline. I was going down a public street and there was this huge explosion in front of me and around me that I had to run out of," explains Clark.

Surviving the explosion led Clark on a journey to help other burn survivors and to work tirelessly to prevent future incidents through public awareness and education. He soon realized that there were a large number of burn victims in the Edmonton area so he began to research the patterns of burns and survival rates.

"So here's Edmonton with under a million people at the time that was having 200 severe burns a year roughly to go through the burn unit. There wasn't room for them all in the burn unit, yet no one was really hearing about this."

Clark's own burns weren't consistent with many of the other burn patterns associated with victims of flash fires. While most people pointed to the circumstances of each fire as the reason for the differences, Clark's research and work with other burn survivors led him to a different conclusion.

"It kept coming back to the clothing. We were getting so many incidents that you could start forecasting it," says Clark. "I think once people understand that, the idea of fire resistant clothing makes a lot more sense."

Clark has devoted much of his life to raising awareness of the need for proper Personal Protective Equipment (PPE). The Canadian Centre for Occupational Health & Safety states that PPE is equipment worn by a worker to minimize exposure to specific occupational hazards. Examples of PPE include respirators, gloves, aprons, fall protection and full body suits, as well as head, eye and foot protection.

In his current role Clark is responsible for maintaining the utilization of the current standards, regulations and specifications for the apparel manufactured by Apparel Solutions. He says there have been tremendous advancements in technology over the years which have allowed development of comfortable, functional, safe clothing for a variety of work environments.

"Now we're into really good products that give thermal insulation and do not ignite. You can still wear them, they're breathable and comfortable. Some of those early products were really difficult to wear. But now we're really seeing, with new product development, the acceptance."

Clark says good safety begins with hazard elimination through engineering. PPE is the next step. Despite the evidence that PPE works, Clark says education is still at the forefront of what he does.

"Some places just don't have that yet. Without that they'll tell you this stuff doesn't work and therefore they're going to fight it. They don't have the knowledge. They don't understand it."

### **East Coast Canada**

East Coast Canada has been hailed as very progressive in its efforts to acquire PPE designed to mitigate the hazards associated with various offshore environments.

"There are some people who are really cutting edge with the products that they want and are willing to try out. And it's not just the fire resistant clothing. It's also the high visibility gear. People are now also requesting that clothing be third party certified," says Clark.

Tom Legare, President and CEO of Apparel Solutions, says they are continually challenged by companies to engineer specific PPE solutions. For example, the company is currently working hard to understand the long-term effects of working around hazardous chemicals, especially diesel-based drilling muds. In the oilsands, there is now a demand for PPE to protect against steam and hot water. Water repellency is an important factor offshore

"We've been working for 10 years to find the appropriate garments for offshore that are waterproof. Along with water proof often comes melting. So you're mitigating one hazard but adding a negative for another hazard," explains Legare. "We're working very hard to find solutions for water proof, fire resistant clothing that is high visibility."

While PPE solutions are continually being engineered, all of these men agree that ongoing education about its use is critical.

Tom Legare says it's fortunate that attitudes are changing and both employers and employees are more proactive when it comes to safety.

"The workforce is a lot younger now and very well educated. These young kids, they're not saying oh well, because I work in the oil patch I may lose a finger, I may get burned. They want to protect their friends and their co-workers and their families. They're very well educated and there are a lot of technological advancements that have come at the expense of the education."

Pat Stamp and his family have faced a long road to recovery since his accident. While re-living the incident still causes him pain, he has decided that speaking about it is worth it if it helps others. His first public speaking engagement was at a school in his home town of St. Vincent's. Following that, he was asked to speak at a safety conference in Gander.

"The positive feedback I got from that led me to say well, I was left here for a reason and what is that reason. This is what I'm supposed to do, to talk and tell my story and hopefully prevent another accident from happening.