

# TerranearPMC Safety Share

## Week of July 31, 2017 – The Triangle Shirtwaist Factory Fire

One of the purposes of presenting S&H topics is to look at past events and to learn from these experiences: whether they are tragic or just amusing. Many of the recipients of the Darwin awards fit into both categories. By studying past events we have the opportunity to see how mistakes happen and hopefully learn from them so we can develop proper controls, thereby preventing similar tragedies in the future. But probably, just as pertinent, by studying these cases, we remember those that succumbed to their misfortunes. And therefore, in our own small token of remembrance, we pay tribute to them and allow their memories to live on.

Such is the case of the **Triangle Shirtwaist Factory Fire** in New York City. It was on March 25, 1911 when a fire started and caused the death of 146 garment workers – 123 women and 23 men. They died from fire, smoke inhalation, or falling or jumping to their deaths. It was the deadliest industrial disaster in the history of the city, and one of the deadliest in US history. Most of the victims were recent Italian and Jewish immigrant women aged 14 to 43. The factory produced women's blouses, known as "shirtwaists" and normally employed about 500 workers. Employees worked nine hours a day on weekdays plus seven hours on Saturdays. Their 52-hour weekly salary was between \$7 and \$12 a week; the equivalent of \$171 to \$293 a week in modern day currency, or \$3.20 to \$5.50 per hour.

The factory was located on the eighth, ninth and tenth floors of the Asch Building, in the Greenwich Village (the 10-story building was supposedly built from fire-resistive materials). It still stands today and is known as the Brown Building, currently owned by New York University. The Fire Marshal concluded that the likely cause of the fire was the disposal of an unextinguished match or cigarette butt in the scrap bin. Through discussions with workers, it was learned that these bins held two months' worth of accumulated cuttings by the time of the fire. Beneath the table in the wooden bin were hundreds of pounds of scraps which were left over from the several thousand shirtwaists that had been cut at that table. The scraps piled up from the last time the bin was emptied. Coupled with the hanging fabrics that surrounded it, the steel trim was the only thing that was not highly flammable.

Although smoking was banned in the factory, cutters were known to sneak cigarettes, exhaling the smoke through their lapels to avoid detection. Because the owners had locked the doors to the stairwells and exits - a then-common practice to prevent workers from taking unauthorized breaks and to reduce theft - many of the workers who could not escape from the burning building simply jumped from the high windows. The fire led to legislation requiring improved factory safety standards and helped spur the growth of the International Ladies' Garment Workers' Union (ILGWU), which fought for better working conditions for sweatshop workers.

As the workday was ending on the afternoon of Saturday, March 25, 1911, a fire flared up at approximately 4:40 PM in a scrap bin under one of the cutter's tables at the northeast corner of the eighth floor. The first fire alarm was sent at 4:45 PM by a passerby on Washington Place who saw smoke coming from the eighth floor. One group of workers grabbed the standpipe hoseline and attempted to extinguish the fire. They quickly found that the hose was rotted and the valves frozen shut.

Both owners of the factory were in attendance and had invited their children to the factory on that afternoon. A bookkeeper on the eighth floor was able to warn employees on the tenth floor via



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telephone, but there was no audible alarm and no way to contact staff on the ninth floor. According to survivor Yetta Lubitz, the first warning of the fire on the ninth floor occurred at the same time as flames appeared on that level. Although the floor had a number of exits, including two freight elevators, a fire escape, and stairways down to Greene Street and Washington Place, flames prevented workers from descending the Greene Street stairway, and the door to the Washington Place stairway was locked to prevent theft by the workers; the locked doors allowed managers to check the women's purses. The foreman who held the stairway door key had already escaped by another route. Dozens of employees escaped the fire by going up the Greene Street stairway to the roof. Other survivors were able to jam themselves into the elevators while they continued to operate.

Within three minutes, the Greene Street stairway became unusable in both directions. Terrified employees crowded onto the single exterior fire escape, which city officials had allowed Asch to erect instead of the required third staircase. It was a flimsy and poorly anchored iron structure which may have been broken before the fire. It soon twisted and collapsed from the heat and overload, spilling about 20 victims nearly 100 feet to their deaths on the concrete pavement below. Elevator operators Joseph Zito and Gaspar Mortillalo saved many lives by traveling three times up to the ninth floor for passengers, but Mortillalo was eventually forced to give up when the rails of his elevator buckled under the heat. Some victims pried the elevator doors open and jumped into the empty shaft, trying to slide down the cables or to land on top of the car. The weight and impacts of these bodies warped the elevator car and made it impossible for Zito to make another attempt. William Gunn Shepard, a reporter at the tragedy, would say that "I learned a new sound that day, a sound more horrible than description can picture -- the thud of a speeding living body on a stone sidewalk". And when firefighters arrived, their ladders were only long enough to reach as high as the sixth to seventh floors, rendering them useless to rescue the workers caught on the 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> floors.

A quick review of this story verifies that many things were inadequate. If such precautions were properly in place, this disaster would not have happened. The initial cause of the fire, was poor housekeeping – that is allowing combustible materials to accumulate. Along with this was the initiation of an open flame - that is people smoking in in the work area. A designated smoke area (and allowing workers adequate break times) may have prevented this incident all together. Contributing factors – that is, those elements that, if not causing the event, certainly exacerbated the devastation, included the locked doors that were designed to stop unauthorized work breaks, and the fire suppression system (rotten standpipe and frozen valves) not properly maintained. Other influences include inadequate communications to the fire department as well as an internal warning system. The building had only one fire escape and did not have the required third stair case. In addition the fire department was not properly prepared as they did not have ladders that could reach the top floors. And finally, even though it appears that at this time, using the elevators was an accepted practice, as we now know, the extreme heat from the fire caused the elevators to fail.

It seems that through such tragedies, we have the opportunity to learn significant lessons. But at what cost? As it has been said, experience, while being the best teacher, is also the cruelest.

**One of the penalties for refusing to participate in politics is that you end up being governed by your inferiors - Plato**

