

Fire at Hamlet Chicken Processing plant

The owner of a chicken processing factory in the US state of North Carolina was jailed for 20 years following a fire in which 25 people were killed and 54 injured. All had found themselves trapped behind locked fire doors when the fire began.

The accident

The death toll at the Hamlet Chicken Processing plant made this tragedy America's second worst industrial accident. The fire started in the processing room where chickens were prepared for use in the fast-food industry.

After a maintenance worker discovered a leak on a hydraulic line driving a conveyor belt, the line was switched off and the leaking section was replaced by a factory-prepared line. This line was shortened because it was too long and posed a tripping hazard, and a new connector was installed. Shortly after the line was brought back into use, it separated at the connection point. It is thought that the pressurised hydraulic fluid atomised and exploded when it was exposed to heat from the processing plant fryers.

25 workers were killed and 54 injured, all of them trapped behind locked fire doors.

Six months after the incident, the owner of the factory, his son, the plant manager and the maintenance supervisor were all indicted on involuntary manslaughter charges. A Grand Jury sent the owner, his son and the plant manager for trial, but not the maintenance supervisor. The owner pleaded guilty to the charges and was sentenced to 19 years and 11 months in jail, and released after serving four years of the sentence. The charges against his son and the plant manager were not proceeded with.

The parent company, Imperial Food Products, which owned a number of similar factories, was prosecuted for a number of breaches of safety regulations and fined a total of \$808,150. The fines were never paid, however, because the company declared bankruptcy and closed down.

The buildings on the site of the fire were torn down in 2002 and a public park, with 25 granite stepping stones – one for every worker killed – was opened at the site where the Hamlet Chicken Processing Plant once stood.

The health and safety regulatory regime in North Carolina was strengthened after the incident.

Causes

The source of the fire was traced back to a leak on a hydraulic line driving a conveyor belt. A maintenance worker had mentioned the problem, and the line was turned off and drained so that the leaking section could be replaced with a factory-prepared line. This turned out to be too long, creating a tripping hazard. The maintenance worker asked for permission to shorten the line and then cut it and installed a new connector. The line was then brought back to operating pressure. Shortly afterwards, it separated at the point where the connector had been installed and hydraulic fluid escaped.

According to one learned article on the incident¹, it is likely that as the pressurised hydraulic fluid was exposed to heat from the processing room's fryers, it atomised and exploded. The resulting fire caused the very rapid spread of heavy black smoke throughout the plant. When the fire reached a natural gas regulator, the regulator failed and natural gas escaped into the atmosphere, increasing the intensity of the fire.

¹ *A tale of two fires: igniting social expectations for managers' responsibilities* by Paul Govekar and Michele A Govekar, *College of Business Administration, Ohio Northern University, Ada, Ohio, USA*. Published in the *Journal of Management History*, Volume 12, Number 1, Year 2006, pp90-99.

The root cause of the incident was an improvised repair. The hydraulic repair had not been carried out by properly trained personnel and using appropriate materials.

A number of other factors contributed to the severity of the incident. It is obvious that if the exit doors in the factory had been left unlocked, the fire would not have had such tragic consequences. A safety inspection could have revealed the problems and easily prevented the disaster, but there had been no safety inspections.

Lessons

The official investigation into the incident examined the maintenance issue. The final report recommended that high-pressure maintenance and repair work should only be carried out by personnel trained by suppliers of the equipment.

To learn the lessons of the Hamlet Chicken Processing Plant fire, the question employers and workers must ask is:

- Are maintenance repairs to high-pressure equipment at our workplace carried out by workers trained by the suppliers of the equipment?
- Are appropriate materials used when maintenance of the high pressure equipment is performed?

SUMMARY

An improvised repair was the root cause of what has been described as the second worst industrial accident in the history of the United States of America. In the fire that swept through the Chicken Processing Plant in Hamlet, North Carolina, on September 3, 1991, 25 workers were killed and 54 injured, all of them trapped behind locked fire doors.

After a maintenance worker discovered a leak on a hydraulic line driving a conveyor belt, the line was switched off and the leaking section was replaced by a factory-prepared line. This line was shortened because it was too long and posed a tripping hazard, and a new

connector was installed. Shortly after the line was brought back into use, it separated at the connection point. It is thought that the pressurised hydraulic fluid atomised and exploded when it was exposed to heat from the processing plant fryers.

The owner was given a 20-year jail sentence and the business declared itself bankrupt. The official inquiry recommended that high-pressure maintenance and repair work should only be carried out by personnel trained by suppliers of the equipment.

Employers have to ensure appropriate training and competence of the workers carrying out the maintenance activities. Workers mustn't go beyond their level of competence (i.e. beyond their training and experience). Employers have to ensure that there are procedures to follow by workers when confronted with a situation beyond their competence.