



The History of Safety Part 2

There was no organized protection for the workers and it was up to the individual employer as to what standards of workplace safety were set. After many deaths, some hazards such as exposure to lead, mercury or fires in mines (confined spaces) were finally identified as the cause. In 1567, Philippus Aureolus wrote a paper detailing silicosis and other illnesses of miners. He looked at the smelting industry, metalurgists, and the workers associated with handling mercury. The end result was a need identified for proper ventilation in mines (and foundaries). Aureolus also suggested the design of various devices that could supply the fresh air in the mines.

During the 16th and 17th century, pewter mugs and utensils were still in use by the upper class of society. These mugs and utensils still contained lead. Prior to the industrial revolution, master craftsmen were a type of small businessmen. All work processes were labour intensive with all of the work being done by hand. Usually, the work was done in cottages (cottage industry) and not far from the living spaces of the workers. The responsibility for safety was theirs and theirs alone.

1700, the father of industrial medicine Bernadino Ramazzini published the first comprehensive textbook on occupational medicine. Ramazzini published accurate descriptions of many common occupational diseases identified at the time. He was also the first person to describe how workers developed silicosis. Additionally, he also identified various diseases related to unnatural movements of the body and diseases of chemists working in labs. This is something that we now identify as ergonomics.

In the 1800's – the industrial revolution began, and the world would never be the same again. The English Factory ACT of 1833 was the first piece of legislation that created some rights for the protection of workers. Although this Act was in place, there was no real enforcement of the few rights given to the workers.

In 1880, the increase in world population created an increase in demands for products. Mechanization in large factories was developed to increase production. Workers were pulled out of the cottages and put into factories to work. The machines in the factories were designed with the objective of high productivity and not worker safety. This meant exposure of the

worker to open machinery (no guards), fumes, heat, lubricants and chemicals. The lessons of history as identified previously through the documentation of industrial illnesses were largely ignored. The basic understanding of the relationship between the hazards, the work process and the illnesses were not identified.

Work processes and safety systems hit rock bottom during the industrial revolution. Workers were subjected to appalling working conditions. People working in factories were subjected to horrible conditions resulting in numerous injuries, fatalities and slow lingering deaths resulting from poor working conditions that included : noise, chemicals, machinery hazards, unsanitary conditions, and long work hours (14 hours a day) in unventilated factories. Children between the ages of 6-10 were used in the coal mines of England and many other factories in some of the most dangerous jobs. The children were gathered from the orphanages or sold into the work force. The children were used not only due to their cheap source of labour, but they were small enough to fit into the coal veins to work. This meant that time and money was saved by not having to open up a proper tunnel. No labour laws for the protection of children, workers or the employer existed .

Diseases such as weaver's disease were identified in people who made asbestos blankets. Additionally, people in the garment industry making hats were exposed to mercury. This chemical was used in the production of top hats. The symptoms of the workers and the persons wearing the hats included violent tempers and uncontrolled jerking. The term "mad as a hatter" was born. Robert Louis Stevenson also included these symptoms in his Mad Hatter character in Alice in Wonderland. The chimney sweeps in England developed scrotal cancer as the result of being exposed to soot on a regular basis. Miners developed trench foot, silicosis and coal workers pneumoconiosis.

The work force was easily replaced by the employer, and no consequences for injuring, industrial illness, or killing workers on the job existed. The risks, injuries, illnesses and even the deaths were viewed as predetermined by providence or an acceptable part of the job.

Next week, I will conclude the brief history of Occupational Health with the development of the WCB.

If you have any questions about Occupational Health and Safety, please e-mail them either to this paper or to bruce@eastsidesafety.com I will research them, and try to answer them in this column.

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