Solvent Explosion Kills!

An employee died as a result of extensive burns to more than 50 percent of his body. The middle-aged man had been working for five months as a tank cleaner. He had been trained by a co-worker using the “hands on” approach. Although there were no written instructions for the work, the laborer was considered capable of performing the tasks.

On the day of the fatal incident, he was cleaning a tanker which had been used to transport varnish. During the process of washing down the tanker with acetone, he was splattered by some of this solvent. He moved to disconnect the hose which was supplying the acetone, when the metal couplings and the tools sparked as a result of friction. The acetone vapors were ignited and a flash fire engulfed him in flames. His co-workers swiftly extinguished the fire and administered first aid. Sadly, he did not survive.

According to the results of the coroner’s inquest, it was felt that several things could have prevented the mishap. First, it was noted that the company had been refused a permit from the local fire department to use acetone in its cleaning procedures, but was doing so anyway.

The following is a list of recommendations:

- Establish regular safety meetings for the employees
- Compile a manual with written work procedures
- Hold safety training sessions for correct handling of cleaning materials
- Instruct the workers in the use of protective clothing and equipment
- Use non-sparking tools and hose couplings
- Properly ground and bond all tankers and equipment during the cleaning procedures
- Substitute a safer product for the flammable acetone.

This example points out just how quickly a “We’ve always done it this way” habit can turn into a deadly event.