Glue Vapors Explode



A worker and his supervisor were working in a confined space using a flammable substance and an acetylene torch. The confined space was a freshwater pumping station. The two men were installing rigid foam insulation to the inside of concrete walls by using a flammable glue. The walls were wet from condensation, so they were using the acetylene torch repeatedly through the day to dry the wall before applying the glue. Before they started work, they had read the flammable liquid warning label and then experimented to see if the glue would burn. They had dabbed some on the cement wall and found that it would burn only as long as the torch was applied. From that experiment, they had concluded there was not much danger.

They used half the glue on the first day of the job and left the glue pail in the pumping station overnight. The next day, the worker returned alone to the pumping station. Although there was a strong odor of fumes, he lit up the torch. There was an explosion and fire which burned 80 per cent of his body. He died from these burns several days later.

The supervisor and worker did not recognize the danger of the flammable liquid, even though they had read the label. It appears that they tried to work safely, but lacked the information to make the correct decisions. A Safety Data Sheet (SDS) was not available. They also did not take into consideration that they were working in a confined space. Their homemade flammability test was sadly misguided. It led to a false sense of confidence the second day when flammable vapors had accumulated in the confined area – ready to explode. This fatality points to a tragic lack of safety training. If there is something you don’t understand about flammable liquids, confined spaces or any other safety issue, ask for training.