Arc Welding Safety Fatality File



Arc welder dies in explosion while using an old barrel as a worktable

A 38-year-old male arc welder died as a result of an explosion at a construction company.

The victim was working at a rural shop location to repair a large garbage truck, which was brought to the shop for repairs that morning. Several items were to be added to the rear of the truck and on the main box. The victim was working near a farm building, a 2-story large wood frame structure, which was used as a workshop and for storage of material used in connection with the construction business.

The victim was arc welding some brackets on the back of the truck. He was apparently welding with a wire welder and used a metal 55-gal barrel as a worktable while welding. Apparently, the heat or sparks from the welding ignited residual vapors and/or material in the barrel, causing it to explode. The explosion knocked the victim down and started a fire in the immediate area. An employee heard the first explosion and saw the building on fire near the back of the garbage truck. The employee ran to the area and found the victim, a large/obese man, lying on the ground, with exploded portions of the drum falling about him. The victim was unconscious, and not breathing. When the employee attempted to move the victim, there were secondary multiple explosions and fires, which forced him to stop. The fire increased rapidly and involved propane and acetylene tanks in the establishment. The employee ran and called the local fire department and county sheriff for assistance.

When the fire department and county sheriff arrived on the scene, the entire building was in flames. The fire was extinguished, and the victim’s body was found near the garbage truck parked to the side of the building. The body was taken to a local hospital for an autopsy.

RECOMMENDATIONS based on the investigation are as follows:

- Ensure that welders are suitably trained in the safe operation of their equipment and process.
- Ensure that welding should not be performed on or near used drums, until they have been thoroughly cleaned.
- Develop, implement, and enforce a written safety program. The safety program should include task specific safety procedures and employee training in hazard identification, avoidance, and control.
- Designate a competent person to conduct frequent and regular site safety inspections.