American **Concrete Pipe** Association

SAFETY ALERT

Hot Works

Normally, when one thinks of safety within a concrete products manufacturing facility, lockout tagout, PPE, falling pipe, forklifts, and machine guarding quickly come to mind. Over the years everyone has learned there are many more programs affecting safety that are just out of the mainstream, or off the beaten path so to speak. Hot Works fits that description.

What is "Hot Works"?

"Hot Works" is now included in Wikipedia, where it is defined for industrial settings as any work or task that requires or involves open flames or other sources of heat that could ignite flammable or combustible materials in the work area. To refine that definition for a Concrete Products Manufacturer, welding cages, cutting steel, and using a torch to cut lift holes, are all routine hot works tasks; non routine tasks would include cutting a leg from a machine to install a motor.

Why should we have a "Hot Works" program?

The main reason for using the "Hot Works" program is for the safety of your employees and the protection of your equipment. "Hot Works" asks us to evaluate our workplace for open flames or sparks that could ignite materials that are combustible or flammable. It starts with the employee and their clothing for those that use flame or spark producing equipment, and broadens in scope to encompass their work area(s). There have been incidents of employees catching fire, explosions killing people, not to mention damaging equipment or buildings.

Secondly; OSHA specifies requirements for Liquid Petroleum Gases (LPG) in CFR 1910.110 and Welding Operations in 1910.252, and incorporates by reference the National Fire Protection Association (NFPA) Standard 51B (welding/cutting) and 58B (LP). When inspecting a concrete pipe facility, the regulators, fire departments, or other regulatory agents have ample references if hot works activities are not systematically managed, which can result in fines for noncompliance.

Thirdly, many insurance underwriters will specify that companies they cover have a comprehensive "hot works" program. Financially, it may make sense to develop a program for even a single facility.

Where do I start?"

1. **Determine where and who completes possible "hot works" tasks routinely**
   a. Identify personnel assigned to use welders, cutting torches, or other spark or flame producing equipment; then evaluate required clothing and PPE (spell out PPE) they use during hot works processes.
   b. Determine where spark or flame equipment is used routinely (welding cages, cutting lift holes, maintenance activities, etc.).
   c. Review where combustibles and flammables are stored as compared to location of hot works tasks.
   d. Eliminate or move all unnecessary combustibles (cardboard boxes, paper, plastic, etc) and replace them with metal containers or other non-combustible material. Remove any flammables (spray paint, gasoline, etc.) that may be lying around to their proper storage locations.
   e. Review the structure. If walls, floors or ceilings are made of a combustible material, these will need to be addressed.

2. **Develop a strategy to remove or shield any combustibles and flammables from sparks or flames (regulations indicate a 35' radius from the point of operation, or thoroughly shielded if necessary)**

3. **Develop a program for "Hot Works" that addresses the following:**
   a. Training of employees, both generally for all employees, and specific training for those who participate in "hot works" activities.
   b. A written permit system for tasks which are not routine
   c. A documented audit system
   d. A system of monitoring and review for hot works activities.

"Where can I go if I have additional questions or need advice when developing this program?"

Going online is a great place to start gathering information, but as always, a quick email to the American Concrete Pipe Association with industry specific questions is a great option. Many resources are available to assist you.