

# Welding/Cutting Safety Program



**DEE CRAMER**

HEATING / COOLING / SHEET METAL

*Dedicated People. Delivering Quality.*



## Welding & Cutting Procedures

These written Welding & Cutting Procedures establish guidelines to be followed whenever our employees work with welding and cutting equipment at this company. The procedures here establish uniform requirements designed to ensure that welding and cutting safety training, operation, and maintenance practices are communicated to and understood by the affected employees. These requirements also are designed to ensure that procedures are in place to safeguard the health and safety of all employees.

It is our intent to comply with the requirements of 29 CFR 1926.350 through .354. These regulations have requirements for welding and cutting operations. We also comply with applicable requirements of:

Standard or Regulation:	Name :
ANSI Z49.1-1967	<i>Safety in Welding and Cutting</i>
CGA Pamphlet P-1-1965	<i>Safe Handling of Compressed Gases</i>
29 CFR 1926, Subpart D	<i>Occupational Health and Environmental Controls</i>
29 CFR 1926, Subpart E	<i>Personal Protective And Life Saving Equipment</i>
29 CFR 1926.406(c)	<i>Electrical Specific Purpose Equipment and Installations</i>
49 CFR 192	<i>Transportation of Natural and Other Gas by Pipeline. Minimum Federal Safety Standards</i>
49 CFR 171- 180	<i>Hazardous Materials Regulations</i>

## Administrative Duties

Corporation Safety Director is responsible for developing and maintaining the written Welding & Cutting Procedures. These procedures are kept at the following location: All major jobsites – Master electronic copy on file at main office located at 4221 E. Baldwin Road., Holly, MI 48442.

## Welding and Cutting Equipment

Our company uses the following welding and cutting equipment:

Make, model, and serial				Type:	Quantity:	Purpose and location:
	number:					
ESAB				Meg Welder's	15	Shops Facilities
Airco				Meg Welders	5	4221 E Baldwin Rd., Holly MI 48442

## Training

It is the policy of Dee Cramer Inc to permit only trained and authorized personnel to operate welding and cutting equipment. Welding Shop Superintendent will identify all new employees in the employee orientation program and make arrangements with department management to schedule training.

The following person(s) will conduct initial training and evaluation: The training is done by the local unions JATC program. This instructor(s) has the necessary knowledge, training, and experience to train new welding and cutting equipment operators. Trainers' qualifications include: Certified welding instructor.

### *Initial Training*

Our classroom instruction includes the following: All training is done in our

local union apprenticeship training facility- depending on what local union. Classroom instruction, itself, cover's the following topics: All OSHA/MIOSHA requirements are met prior to graduating to a journeyman mechanic sheet metal

Our training includes these formats: Information is on site of the local training centers. All welders and cutters are trained and tested on the equipment they will be operating before they begin their job. Our practical training cover's the following:

All required OSHA/MIOSHA by 1910.252 254 and 255 regulations are covered under the apprenticeship program.

During training, Dee Cramer Inc cover's the operational hazards of our welding and cutting operations, including:

- + Hazards associated with the make and model of the welding and cutting equipment.
- + Hazards of the workplace; and
- » General hazards that apply to the operation of all or' most welding and cutting equipment.

See Appendix A for company-specific hazards of on' welding and cutting equipment and our workplace.

Each potential welder or cutter who has received training in any of the elements of our training program for the types of equipment which that employee will be authorized to operate and for the type of workplace in which the welding and cutting equipment will be operated need not be retrained in those elements before initial assignment in our workplace if Dee Cramer Inc has written documentation of the training and if the employee is evaluated to be competent.

Training is done by an outside company. See the attached information about the outside company and their training materials.

### *Training Certification*

After an employee has completed the training program, the instructor will

determine whether the potential welder or cutter can safely perform the job. At this point, the trainee will take a performance test or practical exercise through which the instructor(s) will decide if the training has been adequate. All welding and cutting trainees are tested on the equipment they will be operating.

### *Performance Evaluation*

Each certified welder or cutter is evaluated Once employee is brought into the company sample testing is given to ensure proper knowledge of such requests can be met. to verify that the welder or cutter has retained and uses the knowledge and skills needed to operate safely. This evaluation is done by The Shop Supervisor. If the evaluation shows that the welder' or' cutter is lacking the appropriate skills and knowledge, the welder or cutter is retrained by outsourced instructor(s). When a welder' or' cutter has an accident or near miss or some unsafe operating procedure is identified, we retrain.

### *Welders and Cutters*

Under no circumstances may an employee operate welding or cutting equipment until he/she has successfully completed this company's welding and cutting training program. This includes all new welders and cutters regardless of claimed previous experience. The following table lists employees who are currently authorized welders and cutters at this company:

Department or work area:	Employee name/title:	Equipment make and model:
Welding Shop	Given upon request	all previously listed equipment

All employees have a general obligation to work safely with and around welding and cutting operations.

### *Operating Procedures*

Welding and cutting can create certain hazards that only safe work practices can prevent. That's why we have created a set of operating procedures. Our

operating procedures follow:

### *Compressed Gas Cylinders*

Handling, storage, and use of compressed gases around the workplace represents several hazards. Approved practices include but not limited to *keep* valve cap in place at all time when a cylinder is not is use. Use care in handling and storage of cylinders, when hoisting cylinders, secure cylinders in an upright position always. Maintain a distance of at least 20 feet or provide a non-combustible barrier at least five feet high in separating fuel gas cylinders from oxygen cylinders.

### *Gas Welding and Cutting*

Anytime you work with equipment that produces sparks or an open flame, a process that generates excessive heat, there is a risk of fire. Hot Work can be controlled through a hot work policy; some hot work hazards: fire, property and personal loss, explosions of compressed gases, metal splatter and electrical shock.

HOT WORK PERMIT is needed prior to any hot work being done

-Under' the welding and cutting regulation, management is responsible for safe cutting and welding on its property or jobsites. Cutting and welding shall NOT be permitted in areas not authorized by management, sprinklered buildings, the presence of explosives (mixtures of flammable gases, vapors, liquids or dusts with air), near storage of large quantities of exposed, readily ignitable materials such as sulfur, baled paper or cotton.

Also:

Before a regulator to a cylinder valve is connected, crack the valve to clear it of dust or dirt. Stand to one side of the outlet, not in front of it. Make sure sparks, flame or' other' possible sources of ignition are not present. Open cylinder slowly. Do not place anything on top of fuel gas cylinder when in use. Before a regulator is removed from a cylinder valve, always close the cylinder valve and release the gas from the regulator. Check with Supervisor prior to any type of welding with questions or' concerns regarding usage, area, equipment etc.

### *Arc Welding and Cutting*

Wet conditions, or high humidity check for electric shock concern. Do not dip hot electrode into water. Use of holders, cable and other apparatus specifically designed for the purpose, matched to the job and other components and good repair. Turning off the arc welding or cutting machine when it is not being attended. NEVER use cable with repairs or splice within 10 feet of the holder.

### *Fire Prevention*

At all times fire extinguisher will be readily available to all employees and areas where welding and cutting is being performed. When the object to be welded, cut or heated can be moved and a fire-resistant, safe workspace is available, then the welding, cutting, bracing or heating must be done in that space. If not, all fire hazards must be protected by guards to confine the heat, sparks, and slag from such fire hazards. If welding cannot be performed as stated above then welding can NOT be conducted at all. All employees must wear flame-resistant clothing, have firewatcher in attendance when welding, remove all combustible material 35 feet or more from work area, get a hot work permit and follow safety precautions.

### *Fire Watchers*

Fire watchers are to provide support for welders to help prevent and or contain should a fire break out. A fire watcher will be trained in fire hazards and always have a fire extinguisher ready and available. They also must remain at least 1/2 hour after completion of welding or cutting to make sure no smoldering files occur.

### *Ventilation*

Ventilation will be sufficient to protect passerby as welding is going on. No Oxygen shall be used for ventilation. When ventilation is not sufficient to provide clean, respirable air, respirators will be specified according to specifications of our policy. Employees will be trained to know the symptoms of fumes and gases and to leave an area immediately. Perform atmospheric tests and keep a safe distance from fume or gas plume



### *Personal Protective Equipment*

Proper eye protection, helmets, hand shields, goggles, flame resistance aprons will be provided to those welding and cutting. Along with but not limited to proper protective clothing and first aid equipment. When known or unknown toxic materials are present in a job, respirators will be provided.

### *Flammable, Toxic, or Hazardous Materials*

The company will have a competent person to test the Flammability of unknown coatings or obtain information from owner of project. If coating is found to be highly flammable, it will be stripped from the area to prevent fire.

### *Fall Protection*

A welder or helper' working on platforms, scaffolds, or runways shall be protected against falling. This may be accomplished using guardrailings, safety harness, or other equally effective safeguards recommended by OSHA/MIOSHA. Welders shall place welding cable and other equipment so that it is clear of passageways, ladders, and stairways. Maintaining a clear welding or cutting area to prevent slips, trips, or falls

### *Maintenance*

Any deficiencies found in our welding and cutting equipment is repaired, or defective parts replaced, before continued use. However, no modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturers written approval. If such modifications or changes are made, the capacity, operation, and maintenance instruction plates, tags, or decals, must be changed accordingly. In no case may the original safety factor of the equipment be reduced.

While defective parts may be found, we prefer to invest time and effort into the proper upkeep of our equipment, which results in day-to-day reliability. Keeping up with the manufacturer's recommended maintenance schedules, and completing the proper records, increase our welding and cutting equipment's longevity.



The Shop Superintendent and Operations Manager: order, receive, review, and inspect along with manufacturer representative on all new and repaired equipment. complete a receiving or delivery inspection whenever our company purchases welding and cutting equipment.

Shop Superintendent along with employee working on specific machine follows the manufacturers operator instruction manual for daily or weekly maintenance.

Periodic maintenance (those completed monthly or less frequently) is done by a factory-trained-expert, or a dealer.

### Signs and Labels

Our company posts signs as follows:

Required signs are posted in shop area and on job sites if welding is being performed in accordance with OSHA/MIOSHA 29 CFR 1910.252, 253, 1926.350 regarding fumes, flashing, heat, sparks, etc.

We use the following labels:

All labeling required by OSHA/MIOSHA regulation requirements are used.

### Recordkeeping

Shop Superintendent is responsible for maintaining the following records:

All OSHA/MIOSHA record keeping requirements are kept in the shop office for review.

These records are maintained in 4221 E. Baldwin Road, Holly MI 48442 for' Until equipment is no longer in use and removed from building.

### Appendix A

Company—specific hazards of our welding and cutting equipment and our workplace include:

Name	Date	Description
Valerie Bradley	02/12/2013	Created document for Dee Cramer, Inc.
Jim Spaulding	03/09/2024	Full review, clerical changes.