

Hot Work
Welding, Cutting, Brazing

(Rev 2-2018, 12/2018, 12/2019, 12/2020, 11-2021)

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31.1 PURPOSE

The procedure helps to establish general requirements for employees working with cutting, and brazing. This program assists with practices and procedures necessary to ensure that welding, cutting, and brazing safety training, operation, and maintenance practices are communicated to and understood by affected employees.

31.2 PROGRAM SCOPE

The Hot Work Program will be used when employees are involved in hot work activities. These activities include electric, oxygen-fuel, arc and resistance welding, and brazing.

31.2.1 Inclusive types of How Work:

- Cutting
- Burning
- Welding
- Brazing
- Heating
- Soldering
- Grinding

31.2.2 Employees

Authorized employees who will perform Hot Work tasks are to be trained in their duties including:

- Task assignment and completion according the Hot Work procedure
- Welding and cutting safety
- Safe work practices
- Steps for complying with T.A. Woods Company’s Hot Work procedure

Affected employees are subject to the requirements of this program and are to be trained on their duties including:

- Understanding of Hot Work procedures
- Recognizing Hot Work tasks and identifying work areas

- Purpose of Hot Work permits
- To never come in contact with or use equipment that is actively controlled by Hot Work procedures

All employees are required to comply with the restrictions and limitations imposed upon them during Hot Work processes.

31.3 HOT WORK ROLES/TASKS

On-site supervision and/or management will be ultimately responsible for implementing these procedures. The procedures will clearly outline the scope, purpose, authorization, rules, and techniques to be utilized for controlling hot work and the means to enforce compliance.

31.3.1 Permit Authorizing Individual

In most instances the Permit Authorizing Individual (PAI) will be the owner, owner's representative, host employer or general contractor. On some projects as determined by specifications, EMS/Fire Departments must review and authorize the Hot Work permit. If those listed do not have a required formatted Hot Work permit, TAW will utilize Hot Work permit (Exhibit 30A) which will be completed and posted near the Hot Work area.

TAW site superintendent or designated foreman is responsible for Hot Work Safety, and duties included:

- Completion and review of a hazard analysis
- Completion of Hot Work Permit and review with employees
- Considering safety of the hot work operator and fire watch
- Determining site-specific flammable materials, hazardous processes, or other potential fire hazards present or likely to be present in the Hot Work location
- Ensuring fire prevention by considering alternative methods of hot work, moving work to a location free from combustibles, if can't be moved, moving combustibles a safe distance or using shielding
- Denying Hot Work requests if fire protection is inadequate
- Determining fire protection and extinguishers are properly located
- Ensuring fire watch is conducted as required
- When fire watch is not required, PAI will check 30 minutes after Hot Work is completed to detect and extinguish smoldering fires

31.3.2 Hot Work Operator

The Hot Work operator must handle equipment safely and use it appropriately so as not to endanger the safety of authorized and affected employees as well as property.

Duties include:

- Having PAI approval before starting Hot Work operations
- Inspecting equipment and tools. If not safe, RED TAG tool and return to the Shop for repair or replacement
- If unsafe conditions develop, cease Hot Work and inform PAI which will normally be the site supervisor or foreman
- If required, inform the host employer or general contractor
- Do not return to Hot Work until authorized by PAI

31.3.4 Fire Watch

A constant fire watch will be assigned when job conditions are hazardous

Duties include:

- Understanding the inherent hazards of the work area and Hot Work
- Ensuring safe conditions are maintained during Hot Work operations
- Stopping the Hot Work if unsafe conditions occur
- Having fire extinguishing equipment readily available and being training in proper use
- Being familiar with the facility, job site, work area and procedures for alerting the host employer, general contractor, or sounding the alarm

The fire watch will watch for fires in exposed work areas and try to extinguish incipient fires and they are in the capacity of the equipment available. Otherwise, the fire watch will sound the alarm immediately.

31.3.5 Non-Company Personnel

When non-company personnel such as subcontractors to TAW are engaged in Hot Work activities, the PAI and/or TAW superintendent or foreman will discuss the work plan.

- TAW will ensure subcontractor complies with TAW Hot Work procedures and if necessary that of the host employer and/or general contractor.
- A Hot Work permit will be submitted for review and comparison to TAW and/or the host employer or general contractor's permit.
- TAW will inspect pre-work planning and work to ensure compliance. Non-compliance will be grounds to be temporarily stopped and reevaluated. Disregard for the policy and procedures in place will be grounds for action.

31.3.6 Mutual Responsibility

The PAI, T. A. Woods Company management and supervision, fire watch, operators, authorized employees, affected employees, subcontractors, host employer, and general contractor if applicable are responsible for safety during Hot Work operations.

31.4 FIRE PREVENTION PRECAUTIONS

Appropriate fire prevention measures will be taken before, during, and after Hot Work.

31.4.1 Precautions Before Work

- Inspect the work area prior to start of Hot Work
- Sweep up all combustible materials including paper, wood, or cloth within a 35 foot radius. Cover combustible floors with damp sand or protect with welding blanket, welding pad, or equivalent
- Provide a fire watch as needed during the Hot Work operations. Maintain the fire watch for a minimum of 30 minutes after the completion of the Hot Work to detect and extinguish possible smoldering fires
- Ensure fire protection, detection, and alarm systems are working and known to all workers
- If working in the vicinity of automatic sprinklers, ask for directives from the host employer or general contractor.
- Verify Hot Work equipment and tools are in satisfactory operating condition and appropriate for the tasks
- All movable fire hazards in the vicinity have been removed and secured in a safe place
- Guards are used to contain the heat, sparks, and slag if fire hazards cannot be removed
- Floor or wall openings or cracks, open doorways, and windows covered or sealed with approved fire-rated or noncombustible material to prevent passage of sparks to adjacent areas
- Correct fire extinguisher is available for instant use
- Welding/Cutting completed only in areas authorized
- Welding/cutter is trained in safe operation of equipment and the safety for assigned tasks
- PPE used as needed including eye protection, helmet, protective clothing, gloves, and respirator
- Appropriate ventilation provided, natural or mechanical
- When working in confined space, a permit must be issued
- All pertinent information should be communicated to workers during the first 5X3 Safety/Production Huddle of the work day.

31.4.2 Precautions During Work

- T.A. Woods Company's superintendent or designated foreman will serve as the Competent Person and reserve the right to halt all Hot Work
- Fully charged and operable fire extinguishers of the appropriate type and size in the immediate work area
- Fire watch in effect as required
- Maintain previous procedural steps listed

31.4.3 Precautions After Work

- Inspect the area after work tasks are completed to ensure compliance
- Fire watch post 30 minutes or more if required by host employer or general contractor after completion of Hot Work tasks to detect and extinguish possible smoldering fires
- Operators, authorized employees and affected employees of TAW should communicate concerns during the day's 5X3 Safety/Production Hudd

31.5 EMPLOYEE TRAINING

Prior to the beginning work in an excavation regardless of depth, all employees must receive training. Training is to include at minimum:

- Location of underground utilities and associated hazards
- Placement of spoil pile
- Maintain heavy equipment from edge of trench
- Equipment use or activities that could affect trench stability
- Atmospheric testing, use of gas monitor, alarms
- Trench inspection
- Roles in emergency rescue including Rally Point
- Safe work practices including access/egress, not working under raised loads, etc.

29.6 PERMITS

As applicable and required by the owner, owner's representatives, or general contractor, a permit will be completed and approved prior to the start of work.