



Hot Work Fire Safety

Hot work is one of the leading causes of fires at industrial facilities according to the National Fire Protection Association. Hot work operations involve some form of open flame that produces heat or sparks such as welding, torch cutting, arc cutting, soldering, brazing. Hot work also involves hot riveting, grinding and pipe thawing. These operations increase the potential for a fire at a facility.

This brochure provides guidelines for plant management to provide a systematic approach to control hot work fire hazards and reduce the fire potential associated with hot work. This brochure also explains how to properly complete and utilize AIG Global Property's Hot Work Permits.

An effective hot work program begins with plant management. Management plays a key role in the hot work program by requiring and supporting a hot work permit policy at the plant. The policy should clearly communicate responsibility, authority and consequences for failure to comply with the hot work program. A proper hot work program requires that a hot work permit be completed prior to the commencement of any hot work task and properly closed out after the hot work task is completed. The policy should clearly state that any hot work being conducted without a valid hot work permit will be stopped immediately.

The hot work program should apply to all contractors. Contracts should stipulate that the facility hot work permit will be used by contractors for all hot work activities.

A hot work permit should be issued to those employees or contractor employees conducting the work only after the proper precautions are taken. The hot work permits should only be issued by qualified (trained) managers or supervisors at the plant. Part 1 (Page 1) of the Hot Work Permit should be retained by the issuing manager or supervisor as an indicator of an open hot work permit.

Hot Work Permit

The first step in evaluating a hot work permit is to determine if the work is truly necessary. Can the task be accomplished safely by another means? Can the work be moved to a designated area where a hot work permit is not required such as the maintenance shop/area?

If the work cannot be done by another means or at a designated site then the issuing manager or supervisor should review the site safety precautions and complete Page 1 of the hot work permit.

Date Permit Expires: The permit should be limited to a single shift. The date that the permit expires should be documented on the form. If the work is not completed within a single shift, or by the date on the form, a new permit should be issued.

Extended Fire Watch: The permit has a standard fire watch time period of 30 minutes. If work is to be conducted in or near storage areas or other areas where a deep seated fire could develop, an extended fire watch should be required. This can be up to 3 ½ additional hours.

PSM or ESH Review: The issuing manager or supervisor should review all the items in this section and check the applicable boxes.

Within 35 ft of task area(s): The issuing manager or supervisor should review all items in this section and check the applicable precautions that have been taken. Any ductwork openings should be covered to prevent sparks from entering the ductwork and being carried into the system.

Work on Walls or Ceilings: The issuing manager or supervisor should check the applicable precautions that have been taken

Work on Enclosed Equipment: The issuing manager or supervisor should review all the items in this section and check the applicable boxes.



Fire Watch

The issuing manager or supervisor should review all the items in this section and check the applicable boxes. All personnel assigned to fire watch must be qualified (trained) to conduct fire watches. The area surrounding the hot work task area, including plant areas situated directly above and below the hot work areas should be monitored. Personnel assigned to fire watch should be trained on the use of fire protection equipment (portable fire extinguishers and or small hose streams)

When the hot work has been completed, the information on Page 2 should be completed by the appropriate personnel.

Hot Work Completed Signed: The individual assigned to conduct the hot work should sign his/her name along with the date and time the hot work was completed. This provides a start time for the fire watch to monitor the work area.

Fire Watch Completed Signed: The individual assigned to the fire watch duty should sign his/her name along with the date and time the fire watch was completed. Where an extended fire watch is required on the permit, the individual should sign off after the extended fire watch time has expired.

Final Check Off Completed Signed: The permit issuing manager or supervisor should sign off after inspecting the area and verifying that all presiding signatures are in place.

After the work has been signed off as completed, Part 2 (Page 2) of the permit should be filed with Page 1 (Page 1) of the permit to signify the hot work has been completed and that the permit is closed out. Both parts should be kept on file for review by a Global Property Loss Control Consultant.



Bring on tomorrow

Global Property - Loss Prevention Engineering HOT WORK PERMIT



Part 1

Hot Work Being Conducted by:
 Employee

Contractor: _____
Issue Date: _____
Job, Task or PO #: _____
Location / Bldg & Floor: _____
Nature of Task:
 Cutting Welding Brazing
 Grinding Soldering
 Thawing Pipe Torch Applied Roofing

The location where this work is to be done has been examined, necessary precautions taken. Permission is hereby granted for this work.
Name of Person Issuing Permit:
Signed: _____

Permit Expires
Date _____ Time _____ AM PM

Extend Fire Watch
Extended Fire Watch Required Yes No
Extended Fire Watch Duration _____ hours

Permit Number: **0000001**

Can the work be completed using a different method or at a less hazardous location, such as at the maintenance shop, which would not require the use of a hot work permit?

INSTRUCTIONS

1. Verify all applicable precautions have been implemented and site is safe for hot work.
2. Complete Part 1 (first page) and retained for records
3. Issue Part 2 to individual(s) conducting the hot work and see additional instructions on Part 2

Form 615 (2/2012)

REQUIRED PRECAUTIONS CHECKLIST

- Review of the operations / task has been conducted and temporary Management of Change issued as necessary.
 - Work permit or line cutting permit has been reviewed and issued as necessary
 - Sprinkler protection, hose streams, fire extinguishers in service and operational.
 - Hot work equipment in good repair & secured as necessary
- Within 35 ft (10 m) of task area(s)**
- Floors Swept clean of combustibles
 - Flammable liquids, combustible liquids, combustible dust, lint and oil deposits removed.
 - Combustible floors wet down, covered with damp sand, metal or other noncombustible shields.
 - Combustible materials removed or protected with fire resistive tarpaulins or metal shields.
 - All wall and floor openings covered.
 - Fire resistive tarpaulins suspended beneath work to collect sparks.
- Work on Walls or Ceilings**
- Construction is noncombustible and without combustible coverings or insulation.
 - Combustibles removed away from opposite side of wall.
- Work on Enclosed Equipment**
- Equipment cleaned of all combustibles
 - Containers purged of flammable, combustible liquids, vapors or gases.
 - Pressurized vessels, piping removed from service, isolated and vented (LOCK OUT TAG OUT).
 - Equipment having stored energy or electrical energy removed from service and isolated (LOCK OUT TAG OUT).
- Fire Watch**
- Fire watch will be provided during and for a minimum 60 minutes (minimum) after the task is completed or for the extend fire watch duration.
 - Fire watch is trained in the use of and provided with portable fire extinguishers or charged, small hose line(s).
 - Fire watch is posted on lower floors if opening existing that allow sparks or embers to drop down.
 - Fire watch is trained on how to properly report a fire alarm via the plant fire alarm procedures or fire alarm system.
 - Monitor Hot Work area for 2-hours after the job is finished.

This permit does not purport to set forth all hazards nor to indicate that other hazard don not exist. By provided this permit, neither AIG Global Property nor any of its employees make any warranty, express or implied, concerning the use of this permit. Furthermore, neither the Company nor any of its employees shall be liable in any manner (other than liability that may be expressed in any policy of insurance that may be issued by the Company) for personal injury or property damage or loss of any kind arising from or connected with this permit.

Global Property HOT WORK PERMIT



Part 2

Hot Work Being Conducted by:

- Employee
 Contractor: _____
Issue Date: _____
Job, Task or PO #: _____
Location / Bldg & Floor: _____
Nature of Task:
 Cutting Welding Brazing
 Grinding Soldering
 Thawing Pipe Torch Applied Roofing

The location where this work is to be done has been examined, necessary precautions taken. Permission is hereby granted for this work.

Name of Person Issuing Permit: _____
Signed: _____

Permit Expires

Date _____ Time _____ AM PM

Extend Fire Watch

Extended Fire Watch Required Yes No
Extended Fire Watch Duration _____ hours

Permit Number: **000001**

INSTRUCTIONS

- Person Doing Hot Work:** Document time work started and post permit at Hot Work Location. After Hot Work is completed document date and time completed and leave permit at site.
- Fire Watch:** Prior to leaving Hot Work Location conduct final inspection, sign, and document date and time of fire watch ending and notify permit issuer that Fire Watch is completed.
- Final Check Off:** Individual who conducts final check off signs and documents date and time of final check off and returns permit to issuer.

Hot Work Completed Signed:

_____ Date/Time _____

Fire Watch Completed Signed:

_____ Date/Time _____

Final Check Off Completed Signed:

_____ Date/Time _____

REQUIRED PRECAUTIONS CHECKLIST

- Review of the operations / task has been conducted and temporary Management of Change issued as necessary.
- Work permit or line cutting permit has been reviewed and issued as necessary
- Sprinkler protection, hose streams, fire extinguishers in service and operational.
- Hot work equipment in good repair & secured as necessary

Within 35 ft (10 m) of task area(s)

- Floors Swept clean of combustibles
- Flammable liquids, combustible liquids, combustible dust, lint and oil deposits removed.
- Combustible floors wet down, covered with damp sand, metal or other noncombustible shields.
- Combustible materials removed or protected with fire resistive tarpaulins or metal shields.
- All wall and floor openings covered.
- Fire resistive tarpaulins suspended beneath work to collect sparks.

Work on Walls or Ceilings

- Construction is noncombustible and without combustible coverings or insulation.
- Combustibles removed away from opposite side of wall.

Work on Enclosed Equipment

- Equipment cleaned of all combustibles
- Containers purges of flammable, combustible liquids, vapors or gases.
- Pressurized vessels, piping removed from service, isolated and vented (LOCK OUT TAG OUT).
- Equipment is stored energy or electrical energy removed from service and isolated (LOCK OUT TAG OUT).

Fire Watch

- Fire watch will be provided during and for a minimum 90 minutes (minimum) after the task is completed or for the extend fire watch duration.
- Fire watch is trained in the use of and provided with portable fire extinguishers or charged, small hose line(s).
- Fire watch is posted on lower floors if opening existing that allow sparks or embers to drop down.
- Fire watch is trained on how to properly report a fire alarm via the plant fire alarm procedures or fire alarm system.
- Monitor Hot Work area for 3-hours after the job is finished.