



Inspection Techniques: Hot Work Operations

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Learning Objective: The student shall be able to identify general fire safety requirements for hot work and welding operations.

Welding, cutting, and other hot work operations ignite thousands of structure fires each year in the United States. Carelessly controlled sparks, hot slag, and direct open flame contact can ignite combustibles with disastrous results.

To minimize the risk of hot work fires, the model fire codes provide the following guidance on fire control.

1. The fire code official or responsible manager should maintain a permit system to control unwanted hot work operations.
2. Permits should not be issued to anyone other than those who are trained and qualified.
3. Hot work areas should be clear of combustibles—including vapors from flammable or combustible liquids—**or** combustible materials should be protected by suitable covers.
4. Openings or cracks in walls, floors, ducts, or shafts near hot work operations should be sealed to prevent sparks from reaching combustible building components. Metal fire-resistant guards or approved hot work curtains may serve as an alternative.
5. Fire protection systems, especially sprinklers, should be maintained in an operable condition. Precautions should be taken to prevent accidental fire detection system operation by smoke or welding flames or arcs.
6. At least one fire extinguisher with a minimum 2-A:20-B:C rating should be located within 30 ft (9,144 mm) of where the hot work is being conducted.
7. If hoselines are provided for fire protection, they should be charged and ready for use.
8. A fire watch should be provided in the area where the hot work is being conducted. The fire watch should remain for at least 30 minutes after the hot work has finished to check for hot spots or hidden fires.
9. The fire watch should be trained in the use of portable fire extinguishers or hoselines.
10. Signs warning “Caution: Hot Work in Progress. Stay Clear.” should be provided if the hot work area is accessible to anyone other than the person conducting the work.



Sparks and slag from hot work operations are a common source of unwanted fires.

For additional information, refer to *International Fire Code*[®], Chapter 26, or National Fire Protection Association (NFPA) 1, *Uniform Fire Code*[™], Chapter 41.

