

## AVOID \$355 MILLION IN PROPERTY DAMAGE AND 5 MISCONCEPTIONS OF HOT WORK PERMITS



According to the National Fire Protection Agency, there were an average of 4,630 structure fires involving Hot Work *PER YEAR* from 2013 - 2017. Costing \$355 Million in direct property damage *PER YEAR*.

<https://www.nfpa.org/-/media/Files/News-and-Research/Fire-statistics-and-reports/US-Fire-Problem/Fire-causes/osHotWork.ashx>

*Can you and your plant afford this type of danger?*

*Are you willing to risk the safety of your employees and facility just because you've always done it a certain way?*

Below are 5 Misconceptions to avoid and maintain the safety desired and save Millions \$ in property damage.



**MISCONCEPTION #1** Hot work is just welding and torch cutting.

**The truth:** As defined by NFPA 51B, hot work is any work that involves "burning, welding, or a similar operation that is capable of initiating fires or explosions." It's not just work that involves flames. After all, you don't need a flame to generate heat. Activities such as drilling, soldering, brazing, tapping, grinding, heat treating, chipping, thawing pipes, and abrasive blasting—often referred to as sand blasting—are all considered hot work.

**MISCONCEPTION #2** Soldering, which is often involved in plumbing-related tasks, is not a big problem.

**The truth:** According to the NFPA report on hot work structure fires, soldering causes 34 percent of hot work fires started in homes. (We don't have the data on whether the work is performed by contractors or homeowners engaged in DIY repairs.) Nevertheless, because this work must usually be performed close to combustible construction materials and insulation, it can be a significant hot work safety challenge.

**MISCONCEPTION #3** The hazard goes away once the hot work operation ceases.

**The truth:** NFPA 51B and other hot work safety practices require someone—normally a trained fire watch—to remain at the work site for a minimum of 30 minutes after hot work has stopped to monitor the site for any smoldering conditions or reignition from hot embers or retained heat. And heat has a way of sticking around. Insurance data indicates that retained heat has contributed to reignition conditions up to four hours after the hot work was performed.

**MISCONCEPTION #4** Hot work safety is the responsibility of the person in charge.

**The truth:** NFPA 51B requires establishing a hot work safety team consisting of three individuals: the person in charge (referred to in NFPA 51B as the permit authorizing individual, or PAI); a hot work operator; and a fire watch. The standard defines their duties as being responsible for safety on the work site and identifying any change in conditions so that hot work stops until the conditions are reevaluated. This is a particular point of emphasis in the training we are conducting for Boston. Essentially, our message on the job site for all workers is if they see something that might be an unsafe change in condition, they need to tell someone so it can be checked.

**MISCONCEPTION #5** Hot work residue, including sparks, slag, spatter, and heat transfer, are usually only transmitted a limited distance.

**The truth:** Many types of hot work, such as welding, grinding, and torch cutting, produce sparks, slag, or spatter that can reach well beyond the immediate work area. For that reason, NFPA 51B establishes a minimum safe distance of 35 feet in all directions from the location of the hot work. In other words, combustible materials must be moved at least 35 feet away from the work to prevent contact with the hot work residue, such as sparks or slag. That distance is only a minimum, and conditions such as wind or proximity to dry grass might necessitate a greater distance. While working at an elevated location, for instance, where sparks can fall vertically, I have seen hot work residue travel distances in excess of 100 feet.

ALL MISCONCEPTIONS taken from: <https://www.nfpa.org/News-and-Research/Publications-and-media/NFPA-Journal/2017/May-June-2017/Features/Hot-Work>

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