

TOOLBOX TALK #11

FOUR WARNINGS OF WELDING FUME PROBLEMS – PART 2

This TBT is the second part of a 2-part TBT topic on welding fumes. Please group this with TBT-10.

Many companies use one of two options to clear the air of welding fumes – filter the dirty air or exhaust the dirty air out and provide clean air from outside. If you are recirculating cleaned air, you'll need to keep below OSHA's Permissible Exposure Limit (PEL) thresholds for metal contaminants generated by welding processes. If you are exhausting the air outdoors, you may be subject to EPA emissions requirements. When you are using a collection system to capture weld fumes, you have to make sure your equipment is doing its job.

Recognizing warning signs that you may have problems with your fume extraction equipment and addressing them promptly is key to protecting workers' health and keeping your jobsite in compliance. Here are a few important indicators that you may have a welding fume problem:

3. **Excessive build-up of fumes.** If you still have welding fumes building up on your jobsite, pay attention to your equipment. If you have a source-capture system, it may need adjusting to get back to the original performance level. Or your process may have changed, and your source points are no longer effective. If you are using an ambient ventilation system, you might see a light cloud during working hours. These light fumes should dissipate when the work stops and the filter system stays running. Watch out for a fume cloud that thickens throughout the day and hangs in the air long after welding activity ends. If you can see heavy fume accumulation, it doesn't necessarily mean that your fume extraction system isn't working. Sometimes you are producing more than expected and the system needs to be reevaluated.
4. **Equipment issues.** Whether you choose to exhaust air outdoors or recirculate air indoors, one strategy that offers multiple benefits is the use of a dust and fume collector system. If your system isn't working efficiently to handle the welding fumes created, you'll notice the effects in the performance of the equipment. Be sure to check filters. Make sure they are designed for the task at hand. Also check air pressure on blower systems. They need to handle the load as well. Check any moisture content, especially in colder weather.

If you are experiencing issues regarding weld fumes, it might be wise to have an industrial hygienist or environmental engineer perform air sample testing. This will allow you to pinpoint what pollutants are occurring and to determine whether you are below OSHA PEL thresholds. Also, while you're at it, test your dust for flammability and explosion potential.