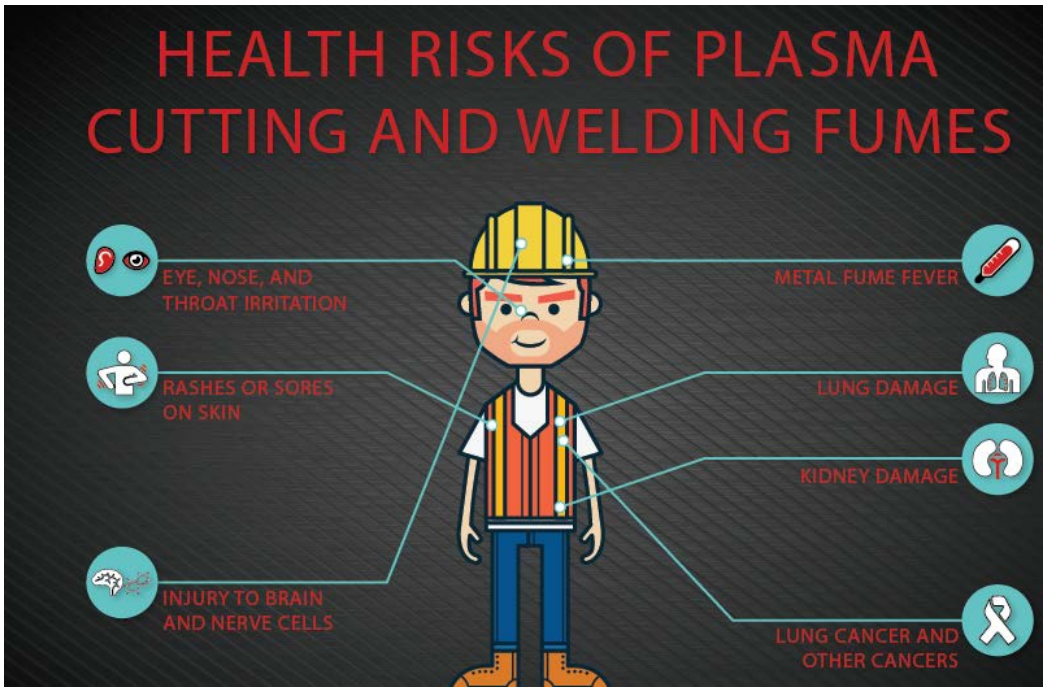
PLASMA CUTTING AND WELDING FUMES PUT YOUR HEALTH IN DANGER

We get a lot of questions about fumes from welding or laser and plasma cutting. People are aware that there are health risks. Many of them have heard about hexavalent chromium, which is a very good reason to be careful when working around metal fumes, but it's not the only reason. "Hex chrome" is just one of the hazards involved in these activities.

You may have heard that hexavalent chromium, often called hex chrome, is mainly a problem for people working with stainless steel. While stainless steel does contain much more chromium than other types of steel, many metals are either alloyed or electroplated with chromium to protect them from corrosion. Mild steel and aluminum can still produce dangerous fumes.



Metals don't usually contain hexavalent chromium. Instead, when the metal is heated to a high temperature, the chromium reacts with oxygen to form compounds, and hexavalent chromium is one of them. This compound, when inhaled, is known to increase the risk of lung cancer and other cancers. When in contact with the skin, it can cause irritation and skin sores.

Other common metals that people may encounter in welding smoke or cutting fumes include iron, copper, zinc, nickel, manganese, aluminum, tin, beryllium, cadmium, lead, and titanium. Most of these can cause eye, nose, and throat irritation. Others, like cadmium, are known cancer-causing agents. Some, such as lead and manganese, are neurotoxins which damage your nerves and brain. Beryllium can cause a fatal lung disease. Components of metal fumes can also cause kidney damage.

Fortunately, there's no reason to put your health in danger just to do your job. OSHA regulations set safe exposure levels for almost all metal fumes, and they recommend several methods to prevent over-exposure. A dust and fume collection system is efficient, effective, and can reduce or eliminate the need for uncomfortable and often improperly used respirators. Every situation is different, but our team can advise you on the best ways to keep people safe when they're welding or working around laser or plasma cutting.

We hope this information is useful for the people who have asked us questions in the past and who come to us with questions in the future. Please contact us if you have specific questions about dust and fume collectors for your welding areas or cutting tables.

Facts about Plasma Cutting and Plasma Technology. Penrose: BOC, n.d. BOC. Web.

Gibson, Hugh. "Plasma Cutting Using A Hand Held Machine." Plasma Cutting Danger!N.p., 19 Mar. 2013. Web. 08 Jan. 2014.

Plasma Cutter Safety Guide | Longevity-inc.com." Plasma Cutter Safety Guide. Longevity-inc.com, n.d. Web. 08 Jan. 2014.

Sheahan, Kyra. "OSHA Safety Standard for Plasma Dust." EHow. Demand Media, 28 Nov. 2010. Web. 08 Jan. 2014.

Stone, Joe. "OSHA Safety Standard for Plasma Dust." Work. Demand Media, n.d. Web. 08 Jan. 2014.

Zlotnicki, Steve. "Does Plasma Cutting Produce Hex Chrome." Plasma Arc Cutting of Stainless Steel Will Produce Hexavalent Chromium. Esab-cutting, 12 May 2013. Web. 08 Jan. 2014.