

## PPE for the Oil and Gas Industry

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### OPINION

Many tasks in the oil and gas and petrochemical industries are high-risk tasks, which expose workers to multiple hazards. Some of these tasks may also be performed in cold weather or in remote locations. There were 823 fatalities in the oil and gas extraction industry between 2003 and 2010—a fatality rate seven times higher than the rate for all U.S. industries. Workers in the oil and gas industry encounter a wide variety of hazards each day.

Workers in oil and gas experience a variety of hazards in the course of their job duties. Oil and gas products and chemicals can cause irritation, corrosion, flammability, and more.

Personal Protective Equipment (PPE) is provided by employers to help protect workers from these hazards. On oil and gas sites, PPE is typically provided in the form of eye, ear, hand, and foot protection and flame-resistant clothing. Health, Safety, and Environment (HSE) managers can find it challenging to decide which PPE solutions is most appropriate thanks to many different manufacturers offering such products.

If your workplace employs the use of sand for any process, such as hydraulic fracturing, it may expose you to crystalline silica. This substance is known to cause silicosis and is a lung carcinogen. The good news is that there is a wide variety of Personal Protective Equipment (PPE) available to protect against these hazards.

According to the Occupational Safety and Health Administration (OSHA), employers must provide their workers with eye protection whenever they are exposed to flying particles, molten metal, corrosive liquids, gases, or vapors; or potentially harmful light

radiation. In order to protect yourself against flying objects, you can use safety glasses with side shields. Impermeable goggles can give you adequate protection while working around liquid, gas, or vapor hazards. A face shield can shield your face completely from flying objects and chemicals.

The face shields cannot act as a substitute for safety goggles or safety glasses, as they cannot protect the eyes as well. Welders wear specialized helmets that filter out radiant light, sparks and flying particles. Risks can arise from flash fires, mechanical hazards, and exposure to hazardous chemicals, dust and solvents. As a rule of thumb, safety professionals apply the hierarchy of controls to minimize risk.

Slip, trip, and fall hazards may threaten workers who step on sharp objects, step on heavy objects, or have their feet crushed by heavy objects. The most common safety boots feature steel or impact-resistant toes and are slip-resistant with a strong grip on the soles. Chemicals and petroleum products can be protected by boots made of neoprene or nitrile. Rubber boots with insulation protect against electric shock. To protect from sparks and molten metal, welders may wear leather leggings over their boots. Employees must be provided with respirators at workplaces with hazardous atmospheric conditions.

All employees must undergo a medical examination and fit test before wearing a respirator to ensure that they are able to use it safely. There is a wide variety of PPE available on the market, but it will only be effective if its users are adequately trained on its use, how to use it, and when to use it. If they do this, the gadget will be effective in the workplace.

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