

HSE Raises the Bar on Welding Safety After IARC Highlights Cancer Risk

Employers been put on notice that the HSE now expects higher standards of ventilation and other controls to minimise welding fumes, following new confirmation that breathing in welding fumes is linked to lung and kidney cancer.

Employers using mild steel – one of the most common types of metal used in the manufacturing, construction, automotive and shipbuilding industries – are specifically mentioned in the safety alert posted on the HSE website, but the revision covers all forms of metal.

According to the HSE, all welding activities indoors will require Local Exhaust Ventilation (LEV) systems, while all welding operations will need engineering control measures and respiratory protective equipment (RPE) to deal with any residual welding fumes.

The update follows the publication, on 30 July 2018, of a monograph on the cancer risks linked to welding by the International Agency for Research on Cancer (IARC), part of the World Health Organisation.

The study on the carcinogenicity of welding fumes found that 11 million workers have a job title of welder, and around 110 million additional workers incur some welding-related exposure.

Based on epidemiological evidence, animal studies and other data, the IARC concluded that all welding fumes, including mild steel welding fumes, can cause lung cancer, and that there was also limited evidence linking it to kidney cancer.

It states that welding can involve exposure to fumes, gases, ultraviolet radiation and electromagnetic fields, dependent on the process used, the material welded, ventilation, degree of enclosure, and use of personal protection.

According to an HSE spokesperson, the alert on the HSE website will be followed by “a range of communications coming soon to explain the changes.

“The HSE welding webpages are currently all being updated and will reference the research and HSE enforcement. The Field Operations Directorate Operational Guidance for the 2019/20 work year will also detail the new approach, and will be published in due course.”

According to Hugh Maxwell FIIRSM, global environmental protection and compliance lead at Swedish welding and cutting expert ESAB, said the new HSE update only confirms the risks and controls that most organisations involved in welding would have been aware of for some time.

“People have known about [the cancer risk] for a long time, but the formal classification means that it will be taken more seriously and raise the profile. The larger companies are likely to have systems in place, but sometimes it’s the smaller companies that aren’t always aware. That’s why it’s important that the HSE campaign is publicised.

“This is not about trying to catch employers out but more about raising awareness. Responsible suppliers have actively promoted and communicated the importance of welding safety and fume control for many years,” he said, mentioning campaigns such as Breathe Freely from the British Occupational Hygiene Society.

On the new requirement to install LEV systems where welding is being carried out indoors, he said: “Natural ventilation is not enough and the positioning, velocity and efficiency of engineering controls are key to reducing worker exposure when welding.”

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But he added that LEV systems had to be well designed to be effective. “If the LEV isn’t in the right location, it can end up pulling the fumes across the person’s breathing zone. It’s important to measure the flow velocities and design the system properly.”

Where RPE is necessary to deal with otherwise uncontrolled risks, the HSE guidance says that there should be an “RPE programme” in place.

Maxwell explained that this means ensuring that the RPE has the “correct protection factor and filtration capability to withstand the types of welding fumes expected to be generated.”

He added that the equipment has to be maintained, serviced, inspected and replaced at stipulated frequencies, and that welders should be “suitably trained in the safe use, fit, maintenance, inspection and replacement of the equipment they are required to use”.

There are currently no workplace exposure limits (WELs) for welding fumes or their components in UK or EU law. However, according to Maxwell, the IARC monograph has prompted discussion of introducing WELs, which he believes will eventually form part of UK workplace legislation.

Source: Healthandsafetyatwork.com

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