



# WeldingWorld ASSOCIATION

## HSE issues a safety alert for welding fume exposure

The Health and Safety Executive has issued a safety alert as a result of new scientific evidence which suggests that exposure to all welding fume, including mild steel welding fume, can cause lung cancer.

As part of bulletin number STSU1 – 2019, the HSE has issued a change in HSE enforcement expectations in relation to the control of exposure of welding fume, including that from mild steel welding.

All those undertaking welding activities should ensure effective engineering controls are provided and correctly used to control fume arising from those welding activities and where engineering controls are not adequate to control all fume exposure, adequate and suitable respiratory protective equipment (RPE) is also required to control risk from the residual fume.

There is also limited evidence linked to kidney cancer.

The alert was issued after new scientific evidence from the International Agency for Research on Cancer suggested that exposure to mild steel welding fume can cause lung cancer and possibly kidney cancer in humans. The Workplace Health Expert Committee has endorsed the reclassification of mild steel welding fume as a human carcinogen.

As a result of this with immediate effect, there is a strengthening of HSE's enforcement expectation for all welding fume, including mild steel welding; because general ventilation does not achieve the necessary control.

In order to control the cancer risk those involved in the process will require suitable engineering controls for all welding activities indoors e.g. Local Exhaust Ventilation (LEV). Extraction will also control exposure to manganese, which is present in mild steel welding fume, which can cause neurological effects similar to Parkinson's disease.

Where LEV alone does not adequately control exposure, it should be supplemented by adequate and suitable respiratory protective equipment (RPE) to protect against the residual fume.

Appropriate RPE should be provided for welding outdoors. Those involved should also ensure welders are suitably instructed and trained in the use of these controls.

Regardless of duration, the HSE will no longer accept any welding undertaken without any suitable exposure control measures in place, as there is no known level of safe exposure.

Risk assessments should reflect the change in the expected control measures.

It is now required that those involved in the process should:

1. Make sure exposure to any welding fume released is adequately controlled using engineering controls (typically LEV).
2. Make sure suitable controls are provided for all welding activities, irrelevant of duration. This includes welding outdoors.
3. Where engineering controls alone cannot control exposure, then adequate and suitable RPE should be provided to control risk from any residual fume.
4. Make sure all engineering controls are correctly used, suitably maintained and are subject to thorough examination and test where required.
5. Make sure any RPE is subject to an RPE programme. An RPE programme encapsulates all the elements of RPE use needed to ensure that the RPE undertaken is effective in protecting the wearer.