

## Welding in schools

The Health and Safety Executive has recently announced that it has raised the control standards for welding fumes to now include the welding of mild steel.

New scientific evidence has been published that indicates that exposure to mild steel welding fume can cause lung cancer and possibly kidney cancer in humans. Based on this scientific evidence the HSE have strengthened their “enforcement expectation” on all types of welding fume. It is now no longer deemed adequate to weld mild steel in just a well-ventilated area as it does not achieve the necessary level of control.

### So how does this relate to welding in the school craft room?

Well, as with all HSE regulations this “enforcement expectation” also applies to all educational establishments with immediate effect. All welding fume is now classed as carcinogenic. Regardless of welding duration, any welding done without suitable exposure control measures in place will not be acceptable.



Figure 2 - Portable style Extraction Unit.



Figure 1 - Welding booth showing movable extraction arm/hood.

### So what control measures should be in place?

Any welding tasks undertaken indoors will require suitable engineering controls to be employed such as Local Exhaust Ventilation (LEV). A typical school setup like figure one would be expected. It should be noted that with this type of extraction (a flexible arm and capture hood) it must be positioned as close as practically possible to the weld area in order to provide effective extraction.

This type of LEV system must be suitably maintained and is subject to a thorough examination and test every 14 months.

If the LEV system employed alone does not adequately control exposure risk, it must be supplemented with suitable respiratory protective equipment (RPE) such as an FFP2 classed mask as a minimum or better still and FFP3 mask. Any welding done outdoors will require the use of RPE.

Other types of welding extraction available include those similar to the one shown in Figure 2. This type of “portable” extraction system uses series of internal filters to capture harmful fumes before recirculating the air back into the room.

It should be highlighted that Risk Assessments should reflect this change and the necessary control measures be taken. The HSE have advised that they will be updating their guidance on welding mild steel as soon as possible. SSERC will also be updating the model welding risk assessment.

