





Controlling exposures to prevent occupational lung disease in MANUFACTURING

## Welding Hierarchy Redesign the job or eliminate a substance so of Control that the hazard is removed. Design the job so there is less hot work, e.g. Using CAD/3D design techniques. There are many different measures that can be Buy in raw materials with edge profiles already cut. implemented to control exposure to hazardous Ensure surface coatings are removed prior to welding. substances. Inevitably, some are more effective than others and it is possible to develop a list of measures in order of priority - a "Hierarchy of Control". Those measures towards the top of the Replace the metal or welding technique with hierarchy are normally considered to be most a less hazardous one. preferable. Use a welding technique that produces less fume. In principle, anyone considering control For arc welding use the lowest current and voltage applicable. techniques should start at the top of Optimise your shielding gas. (2)the list, considering each option in turn and deciding whether it is feasible. Use work equipment or other measures to reduce exposure. The hierarchy is a useful tool, Use suitable local exhaust ventilation (LEV) to remove the but it must be remembered that in most cases more fume at source. Use a turntable to enable welding in a position where the fume than one measure will rises away from the face (in addition to LEV). need to be Ensure adequate room ventilation. implemented to properly control exposure. These are all about identifying and implementing the procedures you need to reduce exposure. Introduce a dedicated area for welding. Control access to working area. Minimise the work carried out in enclosed or confined spaces. Implement a maintenance and test regime for LEV systems. Masks, eye protections, gloves etc. protective Wear a battery powered respirator with a welding visor or helmet if the fume cannot be controlled in other ways. Ensure other workers in the area are not exposed to the fume. • Where respirators are being used, ensure that they are properly fitted, used and maintained.

**Decreasing effectiveness**