

M507 – Health effects of hazardous substances – Revision questions

Section 10 – Specific industry profiles

1. What hazardous substances are likely to be encountered during smelting and refining of iron and steel?
(Pages 156 to 158)
 - Metal oxide fumes – particular metals depends on metals / alloys being worked
 - Crystalline silica and metal dusts during crushing of ores
 - Carbon monoxide from furnace
 - Crystalline silica dust during furnace lining installation and replacement

2. What hazardous substances are likely to be encountered in an iron and steel foundry?
(Pages 159 to 162)
 - Metal oxide fumes – particular metals depends on metals / alloys being worked
 - Metal particulates during grinding and fettling of castings
 - Crystalline silica from sand moulds, particularly during shake-out, fettling of castings and sand reclamation
 - Carbon monoxide from furnace
 - Crystalline silica dust during furnace lining installation and replacement
 - Breakdown products from mould binders e.g. PAH's isocyanates, amines

3. What hazardous substances are likely to be encountered during mining / quarrying operations?
(Pages 164 to 168)
 - Crystalline silica (quartz) – amount depends on the type of rock being mined / quarried
 - Specific metal (ore) / material being mined e.g. lead, coal etc
 - Diesel engine exhaust
 - Naturally occurring gases such as methane, hydrogen sulphide

4. What are the particular problems with regard to exposure to hazardous substance in the pharmaceutical industry?
(Pages 171 to 173)
 - Active ingredients physiologically active
 - Many active ingredients also sensitisers or may have teratogenic effects
 - Exposure limits usually very low (microgram per cubic metre range), therefore total containment often required