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THE PRACTICE OF INDUSTRIAL MEDICINE

BY

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with a chapter on

The Hazards of Coal Mining

by

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With 8 Diagrams.

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Sanders (1941) has given a similar description of a fine pseudo-nodulation (easily mistaken for military tuberculosis) unaccompanied by fibrotic reaction and not disposing to tubercle, in electric arc welders who have worked in confined spaces for long periods of time which he ascribed to iron deposits in the lung. He suggested the term "siderosis of welding" and emphasised that the condition was not progressive if the welder ceased to work in confined and ill-ventilated spaces.

According to the composition and covering of the electrodes electric arc welders may be exposed to fume or dust of zinc, manganese, silica and asbestos (welding rods are of two types (*a*) uncovered, (*b*) covered either with chemical flux or asbestos).

Metal fume fever (see page 144) may result from welding of galvanised metal, especially if this is done in confined spaces.

Nitrous fumes, carbon monoxide and carbon dioxide, and in the case of oxy-acetylene welding, acetylene and impurities may be present in the fumes from welding, and it is said, with what justification is doubtful, that welders are especially liable to suffer from bronchitis. Krasno and others (1943) have suggested that effects due to fume can be avoided by supplying fresh air inside the usual type of welder's hood. In confined spaces the supply of fresh air to the welder is essential; otherwise headache, giddiness, nausea, vomiting and symptoms due to nitrous fumes, such as pharyngitis and bronchitis will occur.

Bridge (1934) has reported a number of cases of acute poisoning from nitrous fumes in oxy-acetylene welders.

Mercury. Mercury poisoning may be due to (1) mercury vapour or air-borne particles, (2) contact of mercury fulminate with the skin, giving rise to a dermatitis, and (3) organic mercurial salts.

Mercury vapour and air-borne particles. Mercury is most often absorbed through the lungs in the form of vapour. The refining of mercury, the recovery of gold and silver, water gilding, the making of thermometers and scientific instruments, all involving the heating of mercury and in the absence of good local ventilation, mercury vapour may be present in the air in sufficient quantities to give rise to poisoning. In the manufacture of surgical dressings, and in hatter's furriers' workshops (mostly of the backroom type) where felt and furs are brushed or "carrotted" with mercury nitrate solution, there may be sufficient dust of textile fibres coated with mercury to give rise to poisoning. The classical symptoms of mercury poisoning, often therapeutically induced in the treatment of syphilis before the introduction of arsphenamines and bismuth compounds, are salivation, loss