

All resins are primary skin irritants and are capable of producing dermatitis in susceptible persons.

Sea Coal - All foundry divisions except National Bearing

This is a common facing used in the foundry and usually contains less than 2% free silica. It is principally carbon. Carbon dust gives rise to a pulmonary condition called anthracosis which is responsible for characteristic shadows in a chest radiograph. It has been considered as a relatively harmless condition. Recent research however, has indicated that it may be a true disease.

When carbon dust is associated with silica dust as an atmospheric contaminant - and it usually is in foundry practice - an exposure results that is capable of producing a true disease entity known as silico-anthracosis.

Permissible dustiness for sea coal and for mixtures of sea coal and silica depends on the percentage of free silica present.

Silica - All foundry divisions.

Silica is one of the principal atmospheric contaminants in the foundry. The chemically combined silicas, other than asbestos, are regarded as being physiologically inert. Thus silicates such as bentonites, slag wool, etc., are not known to produce disabling disease.

Free silica (SiO_2) causes the occupational disease known as silicosis.

In non-ferrous founding, the hazard from silica dust is usually not severe except in the case where silica washes are sprayed on molds and cores or sand conditioning practice is uncontrolled with respect to ventilation. The low incidence of silicosis in non-ferrous work is due to the facts that: the sand is usually in a tempered state during shakeout; there is seldom any burn-in; castings are often shot or sand blasted before grinding and chipping.

In ferrous founding, one of the greatest sources of exposure is the uncontrolled use of silica flour. This material falls in the dangerous particle size range and is usually 100% free silica. Zirconite, which is non-toxic and has a specific gravity of approximately twice that of silica, has been an effective substitute for silica flour in some applications. Because of its density and tendency to flocculate, zirconite dust settles very rapidly.

Sand handling and conditioning systems, shakeout, and sometimes sand slinging operations constitute the principal exposures to silica dust.

Dust sources are usually more severe in mechanized plants but this is offset by the fact that they are more adapted to local exhaust systems.

Good housekeeping is one of the most important ways of controlling the hazard from silica dust. There is good evidence in the