SPECIFICATIONS CLINIC / BY HAROLD J. ROSEN

Controlling Construction Pollution

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This column concludes that due to its contribution to air pollution, asbestos-sprayed insulation must be eliminated in future construction. Rosen is Chief Specifications Writer of Skidmore, Owings & Merrill, New York.

The hazards of air and water pollution are slowly being recognized as more statistical information on their effect on the human environment is coming to the attention of a concerned citizenry. Since the publication of *Silent Spring*, by Rachel Carson, people have begun to question the dangerous side effects that result from chemical pesticides, automobile fumes, and raw sewage dumped into our streams and rivers. Industrial and human wastes, carelessly or innocently disposed of into the atmosphere or into rivers, have an effect on nature's biological balance that governs the production of oxygen and the growth of marine and animal life. In addition, as architects, we should decry the despoilation of our environment resulting from the accumulation of physical mounds of garbage, junked cars, and industrial waste products.

We should also take a closer look at our construction practices to determine whether we are a party to this pollution as a by-product of our designs, and whether we can reduce or eliminate some of our own contributions to this problem area.

Certainly in demolition of existing structures in urban centers, we should restrict the amount of dust that develops. In some European cities, barriers consisting of plastic envelopes are utilized around demolition sites to confine the dust resulting from these operations. Perhaps our Building Departments and our Air Pollution Control Departments should institute stricter controls over such procedures.

A more striking example of how architects can reduce pollution that actually contributes to fatalities is in the selection of certain sprayed-on fire proofing and insulating products.

[illegible] body of an asbestos-textile worker found asbestos particles in the lungs and attributed this death to the worker's occupation. Several isolated instances occurred subsequently where an examination of the lung tissue of deceased asbestos workers indicated the presence of asbestos. In 1924 an English physician, Dr. Cooke, after an extensive autopsy and subsequent search of medical literature, concluded that the death of a patient resulted solely from the inhalation of asbestos fibers and assigned the name asbestosis to this disease.

An investigation of some 363 asbestos-textile workers in Great Britain in 1928 disclosed that 95, or about 25 per cent, showed evidence of asbestosis. As a result, legislation was enacted in Great Britain to require improvements in ventilation and exhaust systems in asbestos-textile plants and periodic examination of workers. Although this improvement in working conditions lengthened the life expectancy of these workers, it was learned in 1935 by Dr. Lynch in this country that asbestos workers were dying of cancer as a result of their association with asbestos. Independent investigators in many parts of the world were likewise coming to the same conclusion based on their studies of the association of workers with asbestos.

Dr. Selikoff, of New York's Mount Sinai Hospital, had an opoprtunity to examine the records of members of the Asbestos Workers Union. The study covered a total of 1522 insulation workers between 1942 and 1962. It was found that the death rate from cancer among these asbestos workers was about seven times greater than that of the general white male U. S. population. [illegible]

not only are people who actual with asbestos exposing thems asbestosis and cancer, but al allied tradesmen in the buildi struction industry, closely ass with this work, are subjected exposure. Steam fitters, elect carpenters, acoustical worke sons, structural steel erecto others employed on projects spray-asbestos insulation in t of this contamination, and w hale these asbestos particles, a posing themselves and are like didates for this disease.

Equally disturbing is the fa asbestos is practically indestru while it may disintegrate, it is erlasting contaminant in the sphere. It has been estimate during its application as firepr to structural steel members and decks, about 10 per cent over and is projected into the atmos On high-rise structures in areas, spray-asbestos fireproofir been found three and four from the construction site, so the unsuspecting general pub likewise subjected to this haza well as the tradesman direct volved in its application. Whil relationship between a man counter with asbestos and pe development of disease in the has not been established, it beh the architectural profession to sider other materials to perfor work of sprayed-on fireproofing insulation.

Not only is there a clear and ent danger in the initial applic of asbestos on the health of th stallers, but 30 or 40 years h when these buildings are torn d the demolition operations, if properly controlled, will add mor bestos fibers to the atmosphere time to the [illegible]