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KAISER CEMENT & GYPSUM CORPORATION

INTER-OFFICE MEMORANDUM

TO J. K. Beatty CONFIDENTIAL

DATE March 24, 1970

COPIES TO

FROM J. C. McCoe

ASBESTOS IN CONSTRUCTION PRODUCTS

The attached article authored by the Chief Specifications Writer, H. J. Rosen of Skidmore, Owings and Merrill was brought to my attention by R. Beck. It is of especial interest since we use asbestos fibers in the manufacture of Cushenbury and Permanente Plastic Gun Cement, as well as Permanente Hand Plastic Cement.

The author relates that deaths from cancer among asbestos workers in the U. S. A. is seven times greater than that of the general white male population. He, also, relates that allied tradesmen in the construction industry are subject to exposure to asbestosis and cancer.

Hod carriers are continually exposed to the dust as they break sacks into the mixer. Knowing how "sue happy" some people are, and knowing that some of these tradesmen will hear of this, if they have not already, it would seem wise to bring this to your attention, as well as that of our legal personnel.

Perhaps this is sufficient reason to locate and use a substitute for the asbestos. Cushenbury Plastic Gun Cement does not utilize asbestos fibers.

Article from Progressive Architecture, February 1970, Page 102, "Specification Clinc."

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SPECIFICATIONS CLINIC

BY HAROLD J. ROSEN

Controlling Construction Pollution

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.

In 1900, a London physician, in performing an autopsy upon the 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. These observations are staggering. In addition, one must conclude that not only are people who actually work with asbestos exposing themselves to asbestosis and cancer, but also that allied tradesmen in the building construction industry, closely associated with this work, are subjected to this exposure. Steam fitters, electricians, carpenters, acoustical workers, masons, structural steel erectors, and others employed on projects using spray-asbestos insulation in the area of this contamination, and who inhale these asbestos particles, are exposing themselves and are likely candidates for this disease.

Equally disturbing is the fact that asbestos is practically indestructible; while it may disintegrate, it is an everlasting contaminant in the atmosphere. It has been estimated that during its application as fireproofing to structural steel members and metal decks, about 10 per cent overshoots and is projected into the atmosphere. On high-rise structures in urban areas, spray-asbestos fireproofing has been found three and four blocks from the construction site, so that the unsuspecting general public is likewise subjected to this hazard as well as the tradesman directly involved in its application. While this relationship between a casual encounter with asbestos and possible development of disease in the public has not been established, it behooves the architectural profession to consider other materials to perform the work of sprayed-on fireproofing and insulation.

Not only is there a clear and present danger in the initial application of asbestos on the health of the installers, but 30 or 40 years hence, when these buildings are torn down, the demolition operations, if not properly controlled, will add more asbestos fibers to the atmosphere. The time to use substitutes for asbestos-sprayed insulation is now.

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