

SHELL CHEMICAL CORPORATION

TO HOUSTON PLANT - MANAGER

DATE MAY 8, 1961

FROM INDUSTRIAL HYGIENIST -
HOUSTON PLANTSUBJECT HEALTH HAZARDS OF
FIBERGLAS

PLAINTIFF'S EXHIBIT

SH-973

The question has recently been raised by some of our Engineering Supervisory personnel as to whether the hazards of handling Fiberglas or Fiberglas reinforced EPON pipe is sufficient to justify the issuing of coveralls to all employees doing this work. The health hazards involved in handling Fiberglas have been extensively studied by independent research laboratories, by Owens-Corning Fiberglas Corporation, by the Bureau of Ships and the Bureau of Medicine and Surgery of the U. S. Navy, and by investigators employed by the International Association of Heat and Frost Insulators and Asbestos Workers Local Union No. 1, St. Louis. All these studies resulted in the same conclusions:

"Breathing glass fiber dust is not harmful to the lungs. Irritation of the skin is temporary, superficial, and not progressive. No special personal protective devices or clothing need be worn, except that in overhead application of glass fiber, goggles are often desirable to protect against falling bodies. Frequent washing and a daily shower with soap and warm water will readily remove most of the small fibers clinging to the skin and will reduce any 'itching'."

With respect to the skin irritation, the Owens-Corning physician in charge of the medical dispensary at the company's plants and laboratories in Newark, Ohio, writes as follows:

"Occasionally, new employees suffer a mechanical irritation of the skin for a few days at the start of the job. For relief from this irritation during the stage when they are becoming accustomed to handling the products, I recommend that they apply as a soothing agent calamine lotion containing one per cent phenol, a preparation that may be obtained at any corner drug store without a physician's prescription...the irritation disappears within a few days, the new workers apparently become immunized against the action of the fibers, and they suffer no further discomfort."

Soap and water has proved most effective in removing particles of fibers, whether of glass or any other material, from the skin. The company has found that there is seldom, if ever, need of gloves, armlets or other protective clothing. In their absence, there is less likelihood that fiber particles will be rubbed into the skin.

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The Union studies concluded:

"The author (Dr. Siebert) believes the following generalization is warranted by the evidence: Contact with glass wool may cause ephemeral discomfort among workers inexperienced in handling the material. The skin irritation, however, cannot be regarded as a progressive dermatitis, for it is non-toxic and usually disappears in a few days. In extremely rare instances, where a worker may be predisposed to secondary effects of mechanical skin irritation because of idiosyncrasy, allergy or the presence of foci of infection elsewhere in his body and otherwise dissociated from the effects of mechanical irritation, lesions may persist. But these cases are encountered with such rarity they do not justify incriminating glass fiber as a causative factor."

The Navy studies found that:

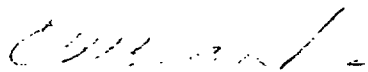
"The irritation of the skin from contact with glass fibers is of a purely transitory and superficial nature. Only the immediate skin areas in contact with or rubbed with glass wool are slightly irritated, accompanied by a slight thickening of the skin, lasting at most for a few days. Minute pieces sticking to the skin and appearing to be superficially embedded are readily removed by ordinary washing with water."

The dust produced by grinding, glass-reinforced plastics have also been studied and these studies show:

"Dust is created which contains particles small enough to be inhaled and to be retained in the lungs of the experimental animals. The dusts derived from the reinforced plastics may be classified as belonging in the category of inert dust in the sense that they do not produce tissue proliferation, tissue destruction or interstitial fibrosis and, in the same sense, too, that any such lesions as may be observed are reversible when the dust exposure is discontinued. No lesions capable of inducing functional incapacitation were observed."

On the basis of all of these studies, there is no reason to believe any health hazard is present in the handling of Fiberglas either from inhalation of the dust or from skin contact, and the uses of protective equipment of any kind cannot be justified on an industrial hygiene basis.

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