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VENTILATION AND PROTECTION EQUIPMENT SETUP
AT THE NEWTON PLANT FOR CYCLE WELD CEMENT PRODUCTION

On April 3rd, Doctor Prendergast referred to me a letter from Mr. P. H. Shaw, Plant Engineer for the cycle weld division and a drawing of the proposed plant layout. On April 8th, Mr. Rook went down to the cycle weld division where he talked with Mr. Shaw and Mr. Smith, the production manager. From the description of the layout, it was our opinion that adequate protection was probably being provided. However, Mr. Smith agreed to send us a list of the chemicals to be used in this plant and the amount of each to be used per month. This list was received on April 17th. After review of this list of chemicals, Dr. Carey P. McCord and I agreed, (1) that almost all of these materials may cause dermatitis, (2) that the following chemicals must must be considered as potential systematic poisons:

Hycar CR-15 - This material is butadiene acryle-nitrile copolymer synthetic rubber. All of the nitrile group may produce cyanide when there is an acid exposure and the mixture should be considered as a potential health hazard. I have been advised that there will likely be no opportunity for this material to come in contact with acid and at least in the mixing process it will be enclosed.

Methanol - Methanol will be piped into enclosed mixers so that there will be little opportunity for either skin or inhalational exposure.

Monochlorobenzene - According to the most recent information that I can obtain monochlorobenzene is only slightly toxic. However, in view of earlier reports in which monochlorobenzene was stated to have approximately the same toxicity as benzol. Adequate precaution should be taken until more detailed information is available. This material is also piped into mixers so that there is little likelihood of exposure.

Toluol - This is used in fairly small quantities and again is piped into mixing vats. There should be no hazardous exposure.

Formocelite - This material is sold in drums and the formaldehyde for curing it will be sold in accompanying drums. Ventilation will be provided for filling these drums but it was recommended that the material when sold should be labeled to indicate that it contains formaldehyde and a warning provided against inhalation of the fumes or excess contact of the liquid with the skin.

Asbestine Talc - This is to be used as a dusting talc. Ventilation was recommended to prevent excess exposure of workmen to this material.

Asbestos Fibre - This forms an important part of the cement. Provision has been made for ventilation at the location where the sacks are opened and loaded to a conveyer. Ventilation is also provided to protect men working on the conveyers and the dumping process is apparently well ventilated. It was not felt practicable to provide ventilation for unloading the sacks from freight cars and it was recommended that laborers engaged in this work should wear ordinary dust respirators.

Red Oxide and White Lead - Both of these materials are used in a paste form and the operation is entirely mechanical so that there should be no appreciable exposure to lead, dust nor any contact of the material with the workers' hands.

COMMENTS: Mr. Shaw and Mr. Smith were extremely cooperative in discussing their plans. Recommendations were made for ventilation to protect against all of the materials described above.

The cycle weld management is well aware of the potential dermatitis problem present from all of the materials to be used in the manufacture of cycle cement. Protective clothing, gloves and overalls are to be provided and showers are to be installed. The question of separate lockers for street and work clothing has been suggested but Chrysler management has not accepted this.

It is my opinion that although separate lockers for street and work clothing may be desirable, the provision of such might establish a precident which might cause some difficulty. Therefore considering the precautions which have been taken to inclose process and prevent exposure to chemicals, it may not be necessary to make such installation. At any rate lockers can be installed later if the need arises.

Mr. Shaw and Mr. Smith requested this division to make studies of conditions after the plant is in operation to determine the adequacy of the protective devices that will be provided.

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CC: Dr. Prendergast
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