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REPORT ON
EFFECTS OF ASBESTOS DUST
ON THE LUNGS
and
DUST SUPPRESSION IN THE
ASBESTOS INDUSTRY

PART I. Occurrence of Pulmonary Fibrosis and other
Pulmonary Affections in Asbestos Workers

PART II. Processes giving rise to dust and methods for
its suppression

BY

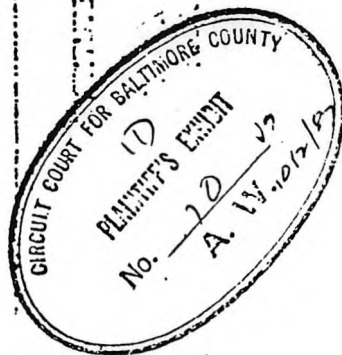
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Preparatory processes in paste making include (i) dry grinding of fiberized asbestos by small vertical disc grinding wheels, fed at the centre from a hopper above and discharged from the periphery into a box below, and (ii) hand mixing of the ground materials at a bench, involving emptying out of dry material into pans. Dust is produced, the amount being considerable in grinding. Little precaution is taken. The processes might be accomplished under almost entirely enclosed conditions, efficient exhaust draught being applied at points where dry material is exposed, e.g., in feeding.

Rewinding of yarn is sometimes necessary and primitive arrangements may be used, the practice referred to on page 24 being followed, and as a considerable amount of dust is produced, the practice should be given up.

Cable and Wiring.—Asbestos-covered cable and wiring constitute a small percentage of the output of the cable factories. The yarn is braided and plaited on the conductors at machines, not reserved for "asbestos" products, similar to those previously described. Rewinding of "cheeses," as receiver from asbestos textile factories, is done at universal winding machines. The amount of dust evolved is small, and special precautionary measures are apparently not required.

Field-coil Wrapping.—Field coils for electrical machinery are wound with asbestos tape by hand at ordinary work benches. The process does not give rise to appreciable quantities of dust.

(g) Miscellaneous.

Moulded Goods.—Some electrical insulating fittings are moulded from varnish-impregnated fiberized asbestos, prepared after thorough drying in a mixer and ground in an edge runner. Alternatively, impregnated scrap, ground in a rumbler, may be used. The preparatory processes on dry or practically dry material are intermittent, and involve sack emptying, shovelling, weighing, filling and emptying shallow trays. They are carried on in an open manner without special precautions except that as regards grinding, hanging curtains may be used at the edge runner, and the scrap rumbler is enclosed. Dust is evolved in the processes mentioned and localised exhaust ventilation should be applied to effect its removal, with, in addition, effective enclosure of some hand work, e.g., emptying of trays into machines could be done inside a cabinet provided with internal arrangements for securing the trays and an external handle for turning them over. Localised exhaust may be necessary for final trimming if done at abrading wheels.

Moulded articles made in other trades may contain but a small proportion of asbestos, although a large quantity may be used. In one case the asbestos is sieved after drying, both operations being done in enclosed machines, and, in addition, dry mixing, done in rotary machines, and paste mixing, on open rolls, as in rubber works, are also required. Processes carried on with some risk of exposure to dust include emptying of sacks into bins, filling of trays for drying, feeding at the sieve elevator hoppers, the dry mixer, and the rolls. Localised exhaust is applied at (a) the elevator hopper, (b) the storage chamber above an intermediate bagging point, (c) the dry mixer, and (d) the rolls. More efficient arrangements appear to be desirable for (a) and (c); the feeding of the elevator might be done under enclosed conditions if a cabinet as mentioned above were provided into which the trays could be inserted. Localised exhaust is necessary at storage bins. Final trimming of rough edges is done under efficient exhaust draught.

Other processes of comparatively minor importance, e.g., asbestos putty mixing, in which there is handling and feeding of dry material in preparatory processes, will call for precautions as previously described for similar work.

4.—SACKS.

In a few cases sacks of sailcloth or other closely woven material are used inside the factories. Such sacks are much to be preferred to those made of the ordinary material, which is "leaky" and gives rise to dust in handling.

5.—CLEANING OF WORKS, MACHINERY AND SACKS.

Some factories are kept in a more cleanly state than others, but higher standards and improved methods are desirable generally. Weekly cleaning by dry methods is general in textile factories, but is more effectively done in some