

CHARACTERISTIC VENTILATION PROBLEMSAND SOLUTIONS IN BRAKEBLOK

F. E. Tayler, Jr.

Dr. Hamlin, in opening the meeting yesterday, pointed out the various occupational disease hazards confronting the Brake Shoe divisions.

We all are aware of the moral obligation that Brake Shoe has in reducing and preventing occupational disease. It is not only a moral matter, but if we fail to properly meet this obligation it becomes an economic problem.

Certainly without adequate dust control and ventilation it costs more to maintain our buildings, equipment and good lighting. Uncontrolled dust not only contributes to lower health standards, but also to a loss of time by the employee. Everybody loses when an employee is sick. A workman will be happier and produce more and better products if his work place is clean, properly ventilated and lighted.

Brakeblok's manufacturing processes may differ from those in your divisions, but we are, no less, confronted with the matter of occupational disease, particularly Asbestosis from inhalation of Asbestos, and Lead poisoning from contact with lead compounds. We are handling other powders and solvents which must be rigidly controlled. We create dust and chips by our grinding and machining operations. We are favored to some degree in that our product in most instances, is small permitting closer hooding of the operation.

Because many of our dust control problems may be similar to yours, Mr. Weber asked me to tell you about some of them and the methods we are using.

Brake lining consists largely of Asbestos, powders, pulverized coal, resins and solvents. These are blended together in various compounding machines. Some formulae contain as many as fifteen different items, each of which has to be weighed out, transported, and loaded into mixing machines and each when weighed, transported or mixed creates either a dust or fume control problem.

The finished product is subjected to six or seven machine finishing operations, each presenting a dust control problem.

At present, our Detroit compounding department is equipped with about 45,000 cubic feet of air per minute in dust collector capacity, consuming approximately 160 horse power, and serving fifty dust and fume control hoods. The finishing department has 88,500 cubic feet of air per minute in collector capacity, consuming approximately 340 horse power, and serving one hundred and twenty dust control hoods. In all, the Detroit plant exhausts over 200,000 cubic feet of air per minute through dust and fume collectors. This represents a large sum of money in electric power to get the dust and fume laden air out and a considerable additional sum to heat the replacement air during the winter.

Brakeblok has provided itself with adequate dust control. To the best of my knowledge no case of occupational disease or sickness has ever been attributed to the dust other than mild cases of contact dermatitis. However, we feel there is still room for improvement. We are continually improving hood designs not only to increase collection efficiency, but also to reduce the quantity of air required to do the job.

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