

We have found by more recent experience that we can satisfactorily convey our dusts at velocities lower than those used previously.

In 1935 our finishing department system was designed with 5,600 feet per minute velocities in the branches, and 5,000 feet in the mains. Today we operate at 4,500 feet in the branches and 4,000 feet in the mains, and we experience no settling out of collected materials. This means a saving in horse power at the collector and in many instances less air exhausted from the plant.

Improved methods of handling and processing often permit better control, and at the same time allow a reduction in the air required.

With the construction of the Winchester plant, we had an opportunity to employ new and different ideas of handling materials, particularly in the compounding department. The slides which I will show you shortly will illustrate these. The new methods employed at Winchester permit the loading of storage bins, weighing and batching of powders and compounding of materials with almost a complete absence of contact between employee and materials handled. The Winchester compounding department is very clean considering the type of materials handled, and can be kept clean at a minimum of expense.

I want to say at this point that the Brake Shoe Construction and Maintenance Department was of considerable help to us in working out many of the details of these new methods.

The slides I have with me were taken in Winchester and Detroit. They will illustrate some of the characteristic problems we have in dust control. Many of the hoods are standard design; others are adaptable to only our particular methods.

((At this point slides were used to supplement the discussion))

The pictures shown might convey to you the idea that Detroit has poor dust control in the compounding department. This is not the case as Mr. Weber's investigations have borne out. Winchester, starting from the ground up, gave us the opportunity of modernizing our methods. This is also true in other new Brake Shoe plants. Wherever possible, what we learn at Winchester will be applied to Detroit in the future.

The balance of the slides to be shown illustrate dust control methods and hood designs as they are applied to the various grinders, saws, drills, and other machines that are required to finish a piece of brake lining.

The dust collectors are of various types. We originally had only dry bag type collectors which you have seen in the slides. However, this type presents both a fire hazard and a double dust problem. Once collected, the dust must be handled again in removing it from the collector hoppers and disposing of it at the dump grounds. The material is readily combustible in this form and burns like peat. We therefore prefer the wet type collector, but frankly we haven't found one that is completely satisfactory.

We've tried the water wheel type, Schneible, the wet type, Roto-Clone and many others. Next to the dry bag collector, the Roto-Clone has the highest efficiency. However, when handling brake lining dust, the maintenance becomes high. A hard scale gradually forms on the blade of the Roto-Clone wheel reducing its efficiency and causing it to throw water out the stack. We find it