

DISCUSSION ON "ELECTRICITY IN THE LUMBER INDUSTRY."
LOS ANGELES, CAL., APRIL 27, 1911.

R. L. Noggle: I might say just one word in favor of electrically operated sawmills, and that is this: You will find that in using electricity, in place of steam you will save on your insurance. Where I am in the northern part of Idaho, we have started to furnish power to two different mills which consume some 750 h.p. The only talking point we could impress them with at all was that of insurance. We are running our plant entirely on refuse and shavings from the saw mills and in turn sell those people 600 h.p.

J. A. Lighthipe: I think the advantage in the lumber industry, if electrically operated, is not so much in operating the sawmill as it is in supplying power to the logging camp. For years they have been trying to get hold of a large portable saw that would take care of the logs. I would like to ask how they have succeeded. They saw up a tree seven or eight or nine feet in diameter, and the question of operating those saws is quite a question. We made a failure at Folsom, not so much in operating the mill as in the lack of logs to saw. At that place we had a great dispute over the amount of power necessary to saw. The boss sawyer used to take a log and jam it through as fast as he could. He would crowd the mill to the utmost. That is about the last experience I have had with any large logging concern. Inquiries have come from the neighborhood of Seattle to know if anything had been developed for an electric saw out in the lumber camps, away out where they drop the logs and section them up. That is where it is needed more than anywhere else.

C. Pemschel: In the first part of this paper in which the author describes the installation at the Elk River & Potlatch Lumber Company, he informs us the hand mills vary in horsepower from 30 to 275 h.p.

I think it would be very interesting for us to know the horse power under the different conditions that the mill is operated. The size of the cut and feed. This same thing also applies to the edges. I also notice that he says that the planers in the planing mills are driven by 75-h.p. motors. Seventy-five horsepower is rather large for the largest size planers and I surmise that one 75-h.p. motor drives a group of planers. Any information that he has, that is, the horse power, that these planers take under actual operating conditions I am sure would be very interesting to the readers of this paper.

The second part of this paper in which electric logging is taken up is interesting to me as I have given this matter considerable consideration and thought and have worked out the scheme of operating these donkeys by means of compressed air and last July read a paper before the Logging Congress

in Portland on this subject. A copy of this paper can be seen in the August issue of *The Timberman*.

J. A. Lighthipe: Seventy-five horse power is nearer right than twenty-five.

The tendency in all of the mills is to force the machines. Power is very cheap and time is very costly and they are apt to overcrowd everything. I found that particularly in the great big band saws where the boss sawyer was trying to drive the logs through as fast as he could. The planers did the same way. They fed those machines up to the limit. The work in these camps is not to be compared with any railroad shops you ever saw. The lumber is cheap, power is cheap, and labor is high.

Ralph Bennett: It appears to me that you were using your planer for resizing. Taking off some very heavy cuts to get a different sized material. That need not occur in a lumber yard or at the mill.

I installed about two years ago a rather large planing mill for this district in which we used electric drive throughout, and turbines for generating. That mill has 40 h.p. on each planer, and they handle the material very nicely.

In this same connection I investigated the possibility of using electric power in their saw mills, and installed a 300-kw. turbine in what they speak of as Mill B. They propose to rebuild Mill A, or build a new mill electrically driven. We found that the 250,000 B. M. mill took about 900 h-p. running idle, 1100 on normal load, and possibly 200 more when all three bands happen to catch at once. The amount of power given in this paper for the bands would not be at all applicable to Pacific redwood mills.

The Potlatch method of logging must also differ somewhat from that used in the redwoods, because it is necessary there to handle not only a logging engine but a yarding engine. The logging engine could be reached by a wooden pole line along the railroad. The yarding engine is, however, three thousand to five thousand feet beyond the road engine on a steep hillside, without any permanent surroundings whatever, and it would be necessary to reach it with a cable. These logs are at present sawed by hand where they are felled. Indeed an enormous possibility in labor saving in the woods exists here. Fuel for the road engines represents less investment than fuel to the yard engines. The road engine is reached by an oil tank car, but oil has to be packed to the yard engine. This oil is brought from Southern California, and taken into woods where they are burning their waste to get rid of it.

At the mill it is true that fuel is valueless. It is also true that the cost of preparing and firing wet sawdust is high. There are times when steam cannot be kept up. By feeding more of this material to refuse burners, and less to the boilers, it can be disposed of at much less cost. The economy of high grade turbines is therefore an advantage after all.

Most modern engine-driven mills have two engines, one for the front and one for the back of the mill. A breakdown in either engine shuts the mill down. Two turbines of the same capacity, both running, would be but part loaded. A breakdown on either turbine would permit the running of the remaining installation with the uninjured turbine.

The author of the paper speaks of the use of storage battery locomotives in the yard. There are now in operation in California and in the southern states, a great many monorail systems, in which the car travels on an I beam rail elevated 25 or 30 ft. above the yard. When properly installed, this will cover the entire storage area, permitting it all to be used for lumber storage purposes. If lumber is piled in stacks in proper shape and tied together, it can be handled into the pile and stored without any hand shoving whatever, and still in the package taken aboard the vessel or car and so transported as a unit from the sorting table to the wholesale lumber yard, thus reducing the cost of handling and storage to a minimum, at the same time producing under proper conditions a much better grade of lumber with quicker handling.
