

WOOD PULP DEPARTMENT

PROPOSED PULP MILL AT MISPEC.

The St. John Sulphite Pulp Company, which is composed of Scotch capitalists, has commenced the erection of a large pulp mill at Mispec, near St. John, N.B. The manager is Mr. M. F. Mooney, of St. John, who returned last month from a visit to Scotland, where he completed the final arrangements with the directors for proceeding with the work.

The mill will be a large brick and stone structure, three hundred feet in length and one hundred feet high, and will be supplied with a modern pulp making plant. The large steel boilers and acid reclaimers will be imported from the United States, but as far as possible Canadian machinery will be used. The site on which the mill will be built is an advantageous one. It is not far from the Bay of Fundy, making the shipment of goods comparatively easy. The manufactured pulp will be conveyed to St. John in barges, and thence loaded on steamers and vessels for Glasgow. The site is most desirable also for the purchase of wood.

THE MANUFACTURE OF SULPHITE FIBRE.

WHITNEY, ONT., March 28, 1898.

To the Editor of the CANADA LUMBERMAN:

DEAR SIR:—I am pleased to know that another sulphite pulp mill is to be built in New Brunswick this spring, at Mispec, by a Scotch company, and probably another in St. John, which I hope will materialize shortly, and possibly a large pulp and paper mill in the Province of Quebec. This goes to show that the Canadians are now beginning to realize that they really do hold the key to the pulp industry of the world. On this latter point I am thoroughly satisfied, provided there is an export duty put on pulp wood. It is pretty generally known, or I might say well known, that the Provinces of New Brunswick and Nova Scotia possess the finest black spruce in the world, which is the best timber for the manufacture of sulphite pulp. This wood possesses a long and strong fibre, which is no doubt due to the climate of the provinces. A large quantity of pulp wood has been shipped to France, for the large pulp mills there, and so it would appear that all that is wanted now is a few more pulp mills, so that the pulp can be manufactured in Canada and sent over to Europe in place of the raw material.

During the past year I have been asked many questions in reference to the manufacture of sulphite fibre by different parties who are considering the building of sul-

phite pulp mills, as to the cost of building, etc., and as your valuable paper no doubt reaches most of the parties interested, I feel sure that to give a few lines on the manufacture and cost of plant in your paper would be appreciated, if you will kindly give me space.

To manufacture a ton of first-class sulphite pulp requires $2\frac{1}{2}$ cords of wood, 400 lbs. of sulphur, and 280 lbs. of lime. In preparing the pulp wood it is first cut into lengths of from 24 to 30 inches, as desired, and the bark taken off by barking machines; then the wood is split by a splitting machine to see if the piece is sound, the knots are next bored out and the wood taken to the chipping machine, where it is cut up, and from this machine the chips are delivered into a breaking machine, which breaks them all up into a uniform size, then onto a screen where all the sawdust is shaken out, and from there on a conveyor to the chip bin above the digestors, where they will be ready for use. This plan of preparing the wood will be found to give the very best results, care, of course, being taken to have nothing but good sound wood.

Next comes the making of the acid, which is a very important part to have right in a sulphite mill, and great care should be taken to have the acid absorbing tanks and settling and storage tanks and all connections perfectly air tight, and with all made perfect not over 400 lbs. of sulphur should be burned per ton of pulp. The sulphur is burned in cast iron ovens made for the purpose, and the sulphur gas passes off into lead pipes, submerged in cold water, which is constantly being renewed, and as the gas passes through these pipes to the acid absorbing tanks, it is cooled down to a temperature of 80 or 90 deg. Fah. It then enters the acid tanks, where it is drawn through and mixed with the limewater, which flows continually through these tanks, and all brought up to the proper acid test, then to the settling and storage tanks ready for use.

In preparing the limewater for use 250 lbs. of lime is slacked in an iron or steel tank, then run into mixing tanks, where the necessary amount of water is added to bring it to the proper gravity, and from these tanks it flows through the acid absorbing tanks, where it is mixed with the sulphur gas.

Now, with the wood prepared and the necessary amount of acid made, the digestors are filled with chips, the necessary amount of acid put in, the steam turned slowly on, and the cooking goes on for 11 or 12 hours, until the pulp is cooked. It is then blown off into blow tanks, well washed with filtered water, then washed out and passed through coarse screens over the riffles, through fine screens again and over the paper machine into paper pulp, ready for shipment.

All the machinery to equip a first-class pulp mill can be made in Canada, just as well as in any other part of the world. Messrs. John Bertram & Sons, of Dundas, Ont., can build as fine a paper pulp machine as desired, as well as all the wood-working machinery required in the wood-preparing room. The digestors can be purchased from several firms; E. Leonard & Sons, of London, Ont., can build them, also Carrier, Laine & Co., of Levis, Que., and no doubt the Bertram Engine Works, of Toronto. The other machinery, such as engines, and boilers, etc., can also be obtained in many places in Canada.

In New Brunswick a 30 ton mill can be built for \$120,000. There is a great demand for sulphite pulp in England; a first class fibre will bring \$50 a ton, while the cost to manufacture in Canada is \$20 per ton, and freight to British port \$5 per ton. So I think, Mr. Editor, that

capitalists who would put money in a good pulp mill would make a good investment.

Respectfully yours,
THOS. R. ALLISON.

PULP NOTES.

The Dominion Paper Co., Kingsey Falls, are setting up a new wet machine, one of the Jenckes Machine Co.'s standard 72" wet presses, shipped them a week or two ago.

The importation of wood pulp into France during last year was practically the same as the year before, viz., about 115,000 tons. In 1895 it was 124,000 tons. It is not considered, however, that the activity of the paper trade has diminished, the reduced import being compensated for by home production.

The Jacques Cartier, Pulp and Paper Company have secured letters patent incorporating E. Goff Penny, M.P., Robert Archer, William Strachan, William Curtis and Robert Law, of Montreal, to carry on and operate the business of manufacturing pulp and paper in all its branches, and to build saw mills, railways, etc. The capital stock is \$50,000, and the proposed works will be located on the Jacques Cartier river, in the province of Quebec.

The Royal Paper Mills Company have recently added a complete rope drive to their transmission machinery at their East Angus mill. This was furnished by the Jenckes Machine Co., Sherbrooke, Que., who are furnishing the entire tank work, together with the accompanying machinery. East Angus presents a scene of great activity, carload after carload of material arriving and being placed in position. When completed this mill will take a prominent place among the producers in the pulp and paper trade.

In a recent address, Professor Fernow, chief of the forestry division of the Department of Agriculture, gave some statistics as to the development of the paper pulp industry in the United States, which has practically all been accomplished within the last dozen years. The first pulp mill in America was established thirty-three years ago, and the increase in production was slow, until a much later period. Now it is estimated that the product is over one and one-half million tons, about two-thirds ground and one-third chemical pulp, this product requiring in the neighborhood of 2,000,000 cords of wood. The product of 1896 was 911 per cent. that of 1882. Such an industry is fast making inroads upon the timber supply most suitable, spruce furnishing by far the larger proportion of it.



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