

WOOD PULP ~ DEPARTMENT

COST OF PRODUCING SULPHITE PULP.

A meeting of the sulphite pulp manufacturers of Canada and the United States was held in Boston on December 28th last. Those present included Messrs. M. F. Mooney, of the St. John Sulphite Pulp Company, St. John, N. B.; P. V. Gascoigne, of the Laurentide Pulp Company, Grand Mere, Que.; and Chas. Riordan and George E. Challes, of the Riordan Pulp and Paper Mills. A question under discussion was the cost of producing sulphite pulp. Figures were submitted representing the cost of three sulphite pulp mills that were built in localities with advantages in the manufacturer's favor, and the figures went over \$10,000 per ton of production. Two of the mills cost \$300,000, and the daily production of each was 30 tons. An estimate is as follows: $2\frac{1}{4}$ cords of wood at \$6 per cord, \$13.50; coal, \$3; sulphur, \$3.30; lime, 70 cents; labor and salary in office, \$7; wear and tear, \$2.50. These figures are based on the cost for manufacturing a ton of pulp, and do not include insurance, interest, taxes, freight or commissions for selling pulp, and yet they show a total cost of \$30 per ton.

The Sulphite Pulp Manufacturers' Association represents a daily production of 650 tons of pulp, only 50 tons being made by manufacturers not represented in the Association.

INCREASED PRODUCTION OF SULPHITE PULP.

"A prominent sulphite manufacturer who has been collecting data concerning new sulphite mills now in course of construction, figures that there is going to be a surplus on hand in America by June, 1901," says the Paper Mill. "It is estimated that within the next six months there will come into the American market from new plants now building, and not counting the proposed increases in capacities of the mills at present engaged in making sulphite, 370 tons of sulphite pulp. This increased production is divided up as follows: Malone Paper Company, Malone, N.Y., 10 tons; Avalomink Paper Company, Minsi, Pa., 10; Jefferson Paper Company,

Carthage, N.Y., 30; Gould Paper Company, Lyons Falls, N.Y., 30; Traders' Paper Company, Lockport, N. Y., 20; Cushing Sulphite Fibre Company, St. John, New Brunswick, 50; J. Henry & Sons, Lincoln, Me., 30; St. Regis Paper Company, Great Bend, N.Y., 40.

"This list, representing 220 tons, shows the new plants which will be in operation by January, 1901. The St. Regis pulp is to be sold outside until April or May, when it is expected the paper mill will begin to run. But even then it is not expected that the paper mill will use all the sulphite product, and it is thought to be the intention of the St. Regis management to supply the felts mills and Taggart's plants with the surplus.

"Between January and June, 1901, the following plants will begin operations:—Sault Ste. Marie Pulp and Paper Company, Sault Ste. Marie, Ont., 60 tons; Bayliss Mill, Williamsport, Pa., 30 tons. To this list is to be added several new mills in the Fox River Valley, which some time between now and June 1 will add 60 tons to the grand total.

"There is little foreign sulphite imported today. Probably 10 tons a day would cover the amount coming in on contracts. During the boom last fall as high as 100 to 150 tons per day were imported.

"It is thought unlikely that even with a greatly increased consumption and the substitution of American pulp for the foreign article, that the domestic demand will be able to care for the increased production."

BEATING WOOD PULP.

Of all pulps wood is perhaps one of the most susceptible to altered manipulation in the beaters, though the chemical processes necessarily have much to do with its properties, says the Paper Maker (England). Sulphite pulp can be beaten to produce a paper exhibiting the high breaking strength of a rag paper, with an almost equal amount of expansion. This does not mean that the best rag papers can be equalled by sulphite,

but that experienced and careful beating will materially affect the strength of the fibre. It is well known that wood pulp may be made tough and strong, or soft and porous, capable of being used as a substitute more or less for cotton and linen, and, on the other hand, for suitable the use of esparto in the manufacture of art papers. The most striking point of difference between rag pulp and sulphite is the resistance to crumpling—a very important quality. Sulphite pulp, even when exhibiting the highest possible breaking strain, is brittle and unable to withstand any extraordinary amount of friction. Rag pulp, on the contrary, is especially suitable for paper which may have to put up with rough handling. The brittleness of wood pulp cannot be greatly modified by the beating, as it is determined by the chemical treatment, and it too much attention is given to making the pulp soft the strength suffers accordingly. The question of adjustment of conditions thus becomes a very delicate one. As far as the paper maker is concerned, his judgment is called into requisition to decide on the merits of various brands of pulp in order that the pulp most suitable for use may be selected. A raw material consisting of fibres of a maximum length is easy to manipulate or to reduce to a given standard in the beater, while a softer pulp is not so capable of alteration, the fibre being already shortened by the chemical process.

Whatever may be the ultimate use of the pulp its manipulation in the beater must be carried out intelligently. It should be a gradual process, the roll being let down on to the bedplate not all at once, but bit by bit, so that for its first half hour or more the engine acts as a breaking machine. In this way the best qualities of the pulp are brought out and the fibres are drawn properly. The roll can then be lowered as much as may be necessary to reduce the pulp to a right consistency. For fine printing the rate of beating is important, as a fast speed gives the paper a mottled appearance, which is highly undesirable in this class of paper, and a evil peculiar to wood pulp. Seeing that wood is now being used as a substitute for all sorts of fibres, and that by careful treatment it may be imparted to it the qualities which at one time were thought to be the particular property of other pulps, it follows that the operations of beating cannot be effectively managed by a hard and fast routine, demanding, as it does, the highest skill in modifying the action of the

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