in excess of what has been possible with the ordinary type of grinders; and the automatic machines have the further advantage that one skilled operator can supervise a number of them, the duty of the operator being only to see that the mechanism is kept in good working order.

In order to avoid misunderstanding, it should perhaps be stated that such devices for constant power consumption can be and are used on the ordinary grinder, and to repeat that so long as the placing of the wood to be ground depends upon the skill of the operator, the best results cannot be obtained.

Chemical Pulp Mill

There have been a number of mills located at places where no hydraulic power is available. Transportation facilities for the supply of materials used in the manufacture, and the marketing of the finished product, are also large factors in the location of a plant of this kind. The plant requires in addition to the two cords of wood per ton of pulp made, sulphur, coal and lime, amounting in weight to over one-half a ton for each ton of pulp made.

The power requirements of the sulphite pulp process may be obtained by referring to Diagram No. 3, and to the following table:—

Apparatus	Approx. H.P. hours required per ton	Performance of apparatus
A. Wood Conveyor...	4 to 8	Delivering wood to plant
B. Chipper.....	16 to 24	Reducing blocks to small chips.
C. Screen.....	1 to 2	Sorting wood chips
D. Chip Conveyor....	3 to 6	Delivering chips to bi
E. Chip Bin.....	....	Storing wood chips.
F. Digester.....	....	Reducing wood to pulp
G. Wash Tank.....	....	Washing pulp.
H. Stock Tank.....	2 to 5	Storage of washed pulp.
I. Circulating Pump	30 to 60	Lifting diluted pulp.
J. Coarse Screen.....	1 to 3	Separating knots from fibre.
K. Fine Screen.....	14 to 25	Separating fine from coarse
L. Wet Machine.....	25 to 35	Separating water from pulp.
M. Knot Reducer....	(not considered)	Reducing knots etc. to low grade pulp.
N. Acid Making.....	48 to 72	Making and delivering acid digester.
	144 to 240	6.0 to 10 H.P. per 24 hours.