TABLE 5.—LABORATORY GRINDING TESTS OF NEW ZEALAND AND NORTH AMERICAN WOODS: GRINDING, YIELD, POWER, AND PRODUCTION DATA.

(All quantities oven-dry basis.)

Species Spec		ages handly from		Grinding Pressure.*				Yield o	Yield of Screened Pulp		č		Produc-	Роwе	Power Requirement.	nt.
Spruce Bary Dressed with Spoint straight-cut burr. Stone as left from run 1. Medium sharp of the straight-cut burr. Bary Spruce	Grinder- run No.	Species	Surface of Ston						Per 100 lb. of Wood.	Per 100 cub. ft. of Wood.	Screen- ings per 100 lb. of Wood.	Duration of Grinding.	tion per Twenty- four Hours.	During Run.	Input to Grinder.	Per Ton per Twenty- four Hours.
Spruce Dressed with 8-point straight-cut burn. Stone 40 22 66 38-7 31-6 79-7 1,586 0-4 6 2 34 34 35 5 79-8 1 1,989 0-8 5 6 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					*****	eg. C.	IP.	lþ.	Ιρ	lb.‡	.qI	Min.	Tons.	KW.H.	H.P.§	H.P.
Lingging pine Stoone as left from run 1. Medium sharp stoone Spruce Lingging pine Stoone as left from run 3. Medium sharp stoone Spruce Spruce Stoone as left from run 5. Medium sharp stoone Spruce Stoone as left from run 6. Medium sharp stoone Stoone as left from run 6. Medium sharp stoone Stoone as left from run 6. Medium sharp stoone Stoone as left from run 6. Medium sharp stoone Stoone as left from run 6. Medium sharp stoone			Dressed with 8-point straight-cut burr.		13	20	49.0	42.1	0.98	2,060	1.0	55	0.55	22	58	51
Spruce Dressed with Spoint straight-cut burn. Stone 30	જ	Insignis pine	snarp Stone as left from run 1. Medium sharp	40	23		39-7	31.6	79.7	1,990	1.9	55	0.41	30	39	94
Insignis pine Stone as left from run 3. Medium sharp 17 55 596 41.7 698 1.680 0.6 1.65 0.19 50 23 1.8 Spruce Stone as left from run 5 dressed with 3-point 4 23 48 36.9 286 77.5 1.940 3.2 50 0.41 2.7 3.8 Insignis pine Stone as left from run 5 dressed with 3-point straight-cut burr for first 20 1.7 55 396 34.4 868 2.170 1.3 55 0.45 30 39 Insignis pine Stone left from run 6 Sharp 20 1.7 55 396 34.4 86.8 2.170 1.3 55 0.45 30 39 Insignis pine Stone left from run 8 dressed lightly with 8 30 to 1.7 55 64.2 46.7 7.2.7 2.620 0.03 85 0.40 31 26 Tawa Stone sa left from run 9 dressed lightly with 10 30 to 1.7 55 64.2 80.7 2.900 0.03 65 0.72 2.1 2.1 Tawa Stone sa left from run 13 dressed lightly with 8 point straight-cut burr Stone with 3-point straight-cut burr Stone with 3-point straight-cut burr Stone with 3-point straight-cut burr 35 19 55 1.7	က	Spruce	. Ston	0	17	55	54.3	41.8	0.22	1,850	0.4	73	0.45	34	34	9 8
Spruce Dressed with 8-point straight-cut burr. Stone as left from run 5 dressed with 13-point straight-cut burr. Stone as left from run 6 dressed lightly with 10. Stone as left from run 13. Medium sharp Stone as left from run 13. Medium sharp Stone as left from run 14. Moderately dull Stone as left from run 15. Sharp Stone as left from run 15. Sharp Stone as left from run 15. Sharp Stone as left from run 16. Sharp Stone as left from run 17. Sharp Stone as left from run 19. Stone as left from run 10. Stone as left from run 11. Medium sharp Stone as left from run 11. Sharp	4	Insignis pine		30	17	 55	45.8	37.2	81.1	2,030	0.5	125	0.21	37	21	97
Insignis pine Stone as left from run 5 decased with 3-point straight-out bur. Stone very sharp Stone as left from run 5 decased with 3-point straight-out bur. Stone very sharp Stone as left from run 13. Modeum sharp Stone as left from run 14. Moderately dull Stone as left from run 15. Stone as left from run 16. Stone as left from run 17. Sharp Stone as left from run 18. Moderately dull Stone as left from run 19. Stone as left from r	က္	Spruce				55	29-6	41.7	8.69	1,680	9.0	155	0.19	20	23	118
Insignis pine Storie left from run 6. Sharp 17 55 394 344 868 2,170 13 55 045 39 39 39 Insignis pine Dressed with 8-point straight-cut burr for first 40 22 22 24 25 2,170 2,620 20 23 31 Tawa Storie as left from run 10 22 24 25 2,487 2,520 2,620 040 31 26 Tawa Storie as left from run 10 22 23 25 244 25 2,620 040 31 26 Tawa Storie as left from run 10 22 23 25 244 25 2,620 040 25 21 27 Tawa Storie as left from run 10 20 22 23 24 25 24 25 2,620 25 24 25 Tawa Storie as left from run 10 20 22 24 25 2,620 25 24 25 Tawa Storie as left from run 10 20 22 24 25 2,620 25 24 25 Tawa Storie as left from run 10 20 20 20 20 20 Tawa Storie as left from run 13 Medium sharp 25 24 25 24 25 24 25 Tawa Storie as left from run 13 Medium sharp 25 25 25 25 25 Tawa Storie as left from run 14 Moderately dull 25 25 25 25 25 Tawa Storie as left from run 15 Storie as left from run 17 Sharp 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 25 Tawa Storie as left from run 17 Sharp 25 25 25 25 25 Tawa 25 25 25 25 25 25 25 Tawa 25 25 25 25 25 25 Tawa 25 25 25 25 25 25 Tawa 25 25 25 25 25 Tawa 25 25 25 25 25	9	Insignis pine	sharp Stone as left from run 5 dressed with 3-point	- 40		- 8	36.9	28.6	77.5	1.940	3.5	50	0-41	27	38	693
Insignis pine Stone set for from run 6. Sharp Special straight-out burn for first 30 to 16 to 22 39 to 30 to		J 0	straight-cut burr. Stone very sharp								. ()
Dressed with 8-point straight-out burn for first 30 to 16 to	7	Insignis pine	Stone left from run 6. Sharp		17	55	39.6	34.4	8.98	2,170	ij	55	0.45	င္က	66	85
Part of run, state part of run, storins straight-cut the part of run, storins straight-cut as left from run 8 dressed lightly with 8 - 30 to 16 to 22 Stone as left from run 8 dressed lightly with 10	œ	Insignis pine	Dressed with 8-point straight-cut burr for first		16 to	:	:	:	:	:	:	330	:	:	:	:
Spruce Stone as left from run 8 dersead lightly with 10 22 22 46.7 72.7 2,620 0.03 85 0.40 31 26 17 awa solut straight-cut burn. Stone as left from run 10 dersead lightly with 10 22 25 64.9 52.4 80.7 72.7 2,620 0.03 85 0.40 31 26 0.01 straight-cut burn. Stone and lightly with 8-point straight-cut burn. 35 19 55			part of run; last part of run, 3-point straight		N N											
Tawa Doint straight-cut burration of the straight-cut burration as left from run 9 dressed lightly with 10- and point straight-cut burration of the straight-cut burration of t	6	Spruce .	Stone as left from run 8 dressed lightly with 8.		16 to	:	:	:	:	:	:	210		:	:	:
Tawa Stone as left from run 9 dressed lightly with 10- 30 17 55 64-2 4677 72-7 2,620 0-03 85 0-40 31 26 Tawa Stone as left from run 10 count spiral-cut burr. 30 17 55 64-2 55-0 85-6 3,080 0-03 65 0-72 21 27 Tawa Dressed lightly with 8-point straight-cut burr. 30 17 55 64-2 55-0 85-6 3,080 0-03 65 0-72 21 27 Insignis pine Stone as left from run 13. Medium sharp 35 19 55 <	,	' <u> </u>	point straight-cut burr		22				1			1		į	(
Tawa Stone as left from run 10 30 17 55 64-9 52-4 80-7 2,900 0-03 65 0-58 28 31 Tawa Dressed lightly with 8-point straight-cut burr. 30 17 55 64-2 55-0 85-6 3,080 0-03 65 0-72 21 27 Insignis pine¶ Stone aresed with 8-point straight-cut burr. 35 19 55 <td>01</td> <td>Tawa</td> <td> Stone as left from run 9 dressed lightly with 10</td> <td></td> <td>17</td> <td>25</td> <td>64.2</td> <td>46.7</td> <td>72.7</td> <td>2,620</td> <td>0.03</td> <td>82</td> <td>0.40</td> <td>31</td> <td>92</td> <td>99</td>	01	Tawa	Stone as left from run 9 dressed lightly with 10		17	25	64.2	46.7	72.7	2,620	0.03	82	0.40	31	92	99
Tawa Dressed lightly with 8-point straight-cut burn. 30 17 556 64-2 55-0 85-6 3,080 0-03 556 0-72 21 27 Stone medium sharp Stone dressed with 8-point straight-cut burn. 35 19 55 .	11	Tawa	Stone as left from run 10		23	55	64.9	52.4	80.7	2.900	0.03	92	0.58	88	31	53
Stone medium sharp Stone dressed with 8-point straight-cut burr. 35 19 55	<u> </u>	Таwв.	. Dressed lightly with 8-point straight-cut burn		17	55	64.2	22.0	85.6	3,080	0.03	55	0.72	21	27	38
Insignis pine Stone as left from run 3. Medium sharp 35 19 55	13	Insignis pine .	Stone medium sharp Stone dressed with 8-point straight-out burn Medium shown		19	55	:	:	:	:	:	:	:	:	:	:
Tawa Stone as left from run 14. Moderately dull 30 17	14	Insignis pine	Stone as left from run 13.	35	19	55	:	:	:	:	:	:	:	:	:	:
Insignis pine Stone dressed with 8-point straight-cut burr. 35 19 Fairly sharp Insignis pine Stone as left from run 16. Sharp 30 and 17 and Insignis pine **. Stone as left from run 17. Sharp 30 17	15	Таwа.	Stone as left from run 14. Moderately dull		17	:	:	:	:	:	:	:	:	:	:	:
Insignis pine \P Stone as left from run 16. Sharp 30 and 17 and Insignis pine **. Stone as left from run 17. Sharp 30	16	Insignis pine			19	:	:	:	:	:	:	:	:	:	:	:
Insignis pine**. Stone as left from run 17. Sharp 30 17	17	Insignis pine	Fairly sharp Stone as left from run 16.	. 30 and	17 and	:	:	:	:	;	:	:	:	:	:	:
insignus pine Stone as left from run 17. Sharp 30 17	Ş			25, 52	14											
	<u>s</u>	insignis pinerr.	Stone as left from run 17.		17	:	:	:	:	:	:	:	:	:	:	:

* The peripheral speed of the stone was \$,000 ft. per minute. † The average area of wood against the stone was estimated to be 74 sq. in. † The oven-dry weights per cubic foot, green volume, without bark, for insignis per cubic not be 25 lb. respectively. The value used for white-spruce was 24 lb. per cubic foot as given in U.S. Department of Agriculture Bulletin No. 1485. § The power required by the motor was corrected for the motor efficiency; in the belt transmission (97 per cent.) to obtain the power input to the grinder. || Wood selected free of blue stain. Centre of billets bored out and knots removed. |

¶ Wood contained blue stain. Centre of billets bored out and knots removed.