

TABLE II.—*continued.*

AMOUNT OF POWER IN USE IN THE VARIOUS MACHINERY INSPECTION DISTRICTS, AND HOURS PER WEEK WORKED—*continued.*

	Hours per week.	Steam.	Gas.	Water.	Totals.	Grand Totals.
		H.p.	H.p.	H.p.	H.p.	H.p.
Marlborough ...	144 48	75 2,100	... 125	... 315	75 2,540	2,615
Westland ...	144 48	2,838 3,832	77 119	32 258	2,947 4,209	
Canterbury ...	144 48	2,545 9,435	312 1,073	... 311	2,757 10,819	7,156
Timaru ...	144 48	1,145 2,340	6 194	... 89	1,151 2,623	
Otago ...	144 48	8,077 17,310	30 1,023	... 1,301	8,107 19,634	3,774
Southland ...	144 48	5,575 8,230	... 226	... 129	5,575 8,585	
						14,160
						180,588

The above two tables give the amounts of power being used in October, 1903. As similar tables are not available for each year, to show the exact increase in each year, the table below, compiled from the annual reports of the Chief Inspector of Machinery, gives some indication of the growth of steam plants in the colony during the past six years:—

TABLE III.

NUMBER OF STEAM-BOILERS IN USE IN NEW ZEALAND.

Size.	1899.	1900.	1901.	1902.	1903.	1904.
	No.	No.	No.	No.	No.	No.
Under 5-horse power ...	...	907	890	981	995	1,144
5 to 10-horse power ...	...	496	490	595	634	855
Over 10-horse power ...	...	909	1,004	1,194	1,237	1,448
Totals ...	2,285	2,312	2,384	2,770	2,866	3,447

There has been a large increase last year in the number of steam plants. The increase in power is equal to about 18,700 effective horse-power in steam plants alone, and there has, probably, been an increase also under the heads of oil, gas, and water motors.

Table II. shows 51,465-horse power working 144 hours per week, and 112,247-horse power working forty-eight hours per week. Dividing the last year's increase proportionately between the full-time working and eight hours a day, and taking the locomotives at 50,000-horse power for eight hours a day for the total amount of power now in use (250,000-horse power approximately), the mean number of hours per day now worked would appear to be about 11½. This is the average for the colony. The mean time for the various districts would each differ from this. From this result the cases given above of installations of plant sufficient to utilise the whole of the water in any scheme when working full power for twelve hours each day, would appear to about meet present New Zealand conditions. The mean time per day got above for the working of the existing plant of the colony is, however, only approximate, as some of the plants returned as working 144 hours, actually work 168, while others may not work full power all the 144 hours. It is impossible to get an exact time without an immense amount of labour.

The estimated amount of hydraulic power, on the information now available, stands at 500,000 b.h.p. for the North Island, and 3,200,000 b.h.p. for the South Island—a total for the colony of 3,700,000 b.h.p. continuous working—about thirty times the amount of power now used for tractive and industrial purposes.

Supposing all the schemes to be developed to work continuously, the cost may tentatively be put at £115,000,000 for the 3,700,000 b.h.p., and if developed to work full power for twelve hours a day, the cost may similarly be put at £220,000,000. These figures are intended to cover some extra plant, cost of transmission to towns, but not cost of net works of distribution in towns or motors, or other necessary machinery in factories.