

I can bear testimony to the zeal generally displayed by all the Inspectors of Machinery, the Surveyors of Ships, and the Examiners of Engineers and Engine-drivers during the year. Their work, at no time pleasant, has been performed in a very satisfactory manner, as the accompanying details of the work as set out in this report will show.

BOILERS INSPECTED.

This work has been rigidly carried out this year, and there are very few boilers outstanding at the end of the financial year to be inspected.

The total number of boilers inspected amounts to 5,968, being 589 in excess of the number inspected last year. A great amount of ground has been covered by the Inspectors to get all this work accomplished, more especially in newly opened districts, where the communications are none too good and the boilers scattered over a wide area. This year a new factor came in to hinder inspections, and that was fire. Some journeys had to be made through country partly devastated by fire, at great risk to the Inspector.

The machinery in motion, also attached to these boilers, was all inspected to see that everything was properly guarded and in order.

GOVERNMENT BOILERS AND MACHINERY.

A total of 136 have been inspected this year—viz., ninety-one boilers, eleven lifts, nine Pelton and other water wheels, two gas-engines, fourteen oil-engines, and nine electric motors.

Repairs were effected to some of these where required, and certificates issued for them, but no fees were charged.

DEFECTS OF BOILERS AND FITTINGS.

At the annual periodical inspection of boilers this year a large number of defects were discovered. Some of the large boilers of the Lancashire type showed unmistakable signs of grooving at the furnace flanging where the furnaces were riveted to the end plating. Some of these plates had gone quite far enough to be safe, and strengthening bosom pieces had to be fitted and riveted over defective flanging. Some of the multitubular type of boilers had to have extensive repairs made to them. Some of the defects were caused by an accumulation of scale and dirt. Several defective plates had to be cut out of some of these, and parts out of others where the bulging of the plates had gone too far.

With regard to locomotive boilers, extensive repairs were made to some of these, including new fire-boxes altogether in some cases; defective parts of the plating of others were cut and part plating renewed, and a good many screwed stays renewed in other cases.

To portable boilers, including traction-engine boilers, numerous repairs were effected, including new fire-box crowns, and parts of plating renewed. In one case seventy screwed stays had to be renewed; in another eighty; one had 137 renewed; one thirty-two; one forty-three; one fifty-three; and several up to twenty screwed stays renewed.

It was found that several of the vertical class of boiler needed fairly extensive repairs. Some of the defects that were discovered were highly dangerous, and would undoubtedly have led to explosion if they had not been checked in time.

The total number of defects discovered in boilers and digesters and to boiler fittings this year was 1,760, and seventy-four of these were very dangerous.

Return No. 2 sets out these defects in detail.

NEW BOILERS.

The number of new boilers added to our books during the year total 465. The horse-power of these amounts to 6,712: 251 of these, totalling 3,002-horse power, were made in the Dominion, and 214, totalling 3,710-horse power, were imported.

The following table shows the number and horse-power of these boilers, and the districts to which they have gone:—

District.	Colonial.		Imported.		Total.	
	Number.	Horse-power.	Number.	Horse-power.	Number.	Horse-power.
Auckland	62	884	49	886	111	1,770
Auckland South	23	241	17	149	40	390
Hawke's Bay	20	295	28	262	48	557
Taranaki	35	241	10	124	45	365
Wellington	37	478	48	1,315	85	1,793
Marlborough	9	228	3	25	12	253
Nelson North	6	44	...	...	6	44
Nelson South	9	131	6	64	15	195
Westland	8	143	2	22	10	165
Canterbury	9	83	16	320	25	403
Timaru	4	16	6	53	10	69
Otago	14	80	3	32	17	112
Southland	15	138	26	458	41	596
	251	3,002	214	3,710	465	6,712