

RETURN of DEFECTS found on the Inspection of Boilers and Fittings during the Financial Year ended 31st March, 1884.

Description.	Wellington.			Marlborough.			Nelson North.			Taranaki.			Hawke's Bay.		
	Dangerous.	Ordinary.	Total.	Dangerous.	Ordinary.	Total.	Dangerous.	Ordinary.	Total.	Dangerous.	Ordinary.	Total.	Dangerous.	Ordinary.	Total.
Grooving and pitting	..	..	..	..	..	..	..	..	..	6	6	..	..	..	..
Blistered plates	1	2	3	..	..	..	..	..	..	..	..	..	..	..	..
Cracked plates	3	2	5	4	..	4	..	1	1	..	..	..	..	4	4
Tube-ends leaking	..	..	..	..	..	..	..	..	..	..	..	..	..	3	3
Plates overheated	2	..	2	1	..	1	..	..	..	..	..	..	1	..	1
External corrosion	..	..	..	3	1	4	..	3	3	..	4	4	..	..	..
Broken stays	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Weak manhole openings	..	..	..	..	..	..	1	1	2	..	..	..	..	..	..
Gauge-glass mountings	..	7	7	..	..	..	..	..	..	..	..	..	..	4	4
Steam-gauges	..	14	14	..	3	3	..	5	5	..	4	4	..	9	9
Safety-valves	..	4	4	..	..	..	..	3	3	..	2	2	..	..	..
Spring balance	..	..	..	..	..	..	..	1	1	..	2	2	..	..	..
Fusible plugs	2	1	3	..	..	..	..	..	..	..	..	..	..	2	2
Feed pumps	..	3	3	..	1	1	..	..	..	..	..	..	..	..	..
Blow-off pipe	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..
Totals	10	33	43	8	5	13	1	14	15	..	18	18	1	22	23

The INSPECTOR of MACHINERY, Auckland District, to the CHIEF INSPECTOR of MACHINERY.

SIR,—

Auckland, 7th April, 1884.

I have the honour to submit for your information my annual report of boilers and machinery inspected in the Auckland District from the 1st April, 1883, to the 31st March, 1884.

RETURN showing the NUMBER and DESCRIPTION of BOILERS INSPECTED, and FEES for the same.

Nature of Boiler.	Number.			Fees.	Remarks.
	Under 5 Horse-power.	5 to 10 Horse-power.	Over 10 Horse-power.		
Portable boilers	...	3	2	£ 160 0 0	Employed at 32 establishments, at £5 each.
Stationary boilers	3	1	79		
Locomotive boilers	...	...	2		
Portable boilers	13	40	18	433 0 0	Charged for at per horse-power of each boiler.
Stationary boilers	84	30	43		
Locomotive boilers	3	2	2		
Totals	103	76	146	593 0 0	

The above return shows an increase of 23 boiler inspections compared with the previous year. The fees for the same period are increased by £26. The prosperous state of trade in this district has caused a steady increase of steam-power. There are, in addition to the above, 45 boilers that have not been inspected, which makes a total of 370 boilers now working in this district. Only two have been granted exemption from annual inspection under the Act of 1882, brought into force on the 31st January last. Forty-five new boilers have been brought into use—25 imported from Great Britain, 2 from America, and 18 made in this colony.

I have given five written and twenty-three verbal notices to repair boilers, all of which were readily complied with. In fact owners show a desire to keep their boilers in working order. When the repairs were large, or difficult to do, the boiler was afterwards proved by hydraulic pressure. The test varied, in accordance with age, &c., from 30 to 50 per cent. over the working pressure. All the new boilers made in this district have been tested to 100 per cent. over. In the dangerous case referred to—Portable Boiler No. 1228, owned by Mr. C. P. Bury, since sold to Mr. W. King—the top of the fire-box was badly bulged, and the tube-plate in the same very much sprung, about one-third of the tube end being drawn half through the plate. In fact there was every indication of the water having been too low, and the plates overheated. I may state it has been thoroughly repaired, and is now in good working order. I found the sides of shell on seats of 5 Cornish boilers wasting, caused by being fixed on low wet ground, and lime in contact with the iron. The lime has been replaced with fireclay, and the ground drained, which I feel convinced will stop the decay that was going on. One boiler has been converted from cylindrical to the tubular principle; 33 have changed owners; 12 have been let out on hire; 1 has been taken from here to the Wellington District, and 3 brought from there to this district.