

1890.
NEW ZEALAND.

MARINE DEPARTMENT

(ANNUAL REPORT FOR 1889-90).

Presented to both Houses of the General Assembly by Command of His Excellency.

My Lord,—

Marine Department, Wellington, 31st August, 1890.

I do myself the honour to transmit herewith, for your Excellency's information, the report of the Marine Department of this colony for the financial year ended on the 31st March last.

I have, &c.,

THOMAS FERGUS,

(For the Minister having charge of the Marine Department.)

His Excellency the Right Honourable the Earl of Onslow, &c.,
Governor of New Zealand.

The ASSISTANT-SECRETARY to the HON. the MINISTER having charge of the MARINE DEPARTMENT.

SIR,—

Marine Department, Wellington, 21st May, 1890.

I do myself the honour to submit the following report of this department for the year ended 31st March last:—

Lighthouses.—An addition to the lighthouses was made during the year by the exhibition of the Cuvier Island light. This light, which was shown for the first time on the night of the 22nd September last, is a first-order revolving white light, attaining its greatest brilliancy once every thirty seconds; and, allowing 15ft. for the height of the observer's eye, it will be visible for a distance of twenty-six nautic miles. The optical apparatus was manufactured by Messrs. Barbier and Fenestre, of Paris; the lantern by Messrs. J. Dove and Co.; and the machine, lamps, &c., by J. Milne and Son, of Edinburgh. The tower, which was manufactured in Auckland, is made of cast-iron; the dwellings and stores are built of wood. The total cost of the lighthouse establishment was, exclusive of the land, which has not yet been paid for, £7,406 16s. 11d. No accident of any importance has taken place at any lighthouse, but the hauling-gear of the wire-rope tramway at Cape Maria van Diemen carried away, and has not yet been replaced. The light on the beacon at French Pass was reported by the keeper to have become extinguished on nine occasions—namely, on 28th June, from 4 to 8 a.m.; on 11th July, from 8 to 11 p.m.; on 30th July, from 2 to 7 a.m.; on 13th October, from 5 to 6 a.m.; on 21st October, from 9 to 10.30 p.m.; on 19th December, from 7 to 10 p.m.; on 13th January, from 6 to 6.15 p.m.; on 17th January, from 1 to 4 a.m.; and on 30th January, from 7 to 8 p.m. Six lightkeepers left the service during the year; the services of two having been dispensed with on account of ill-health, two having resigned, one transferred to the Harbour staff, and one died.

New Lighthouses.—Nothing further has been done in the matter of the erection of a light at the Snares. A letter has just been received from the Premier of Victoria, forwarding a copy of a despatch from the Imperial Government, in which they decline to contribute towards a light on that group. I desire again to draw attention to the desirability of proceeding with the erection of a light on Stephens' Island as soon as possible. A light there would be of great benefit to both coasting and oversea trade.

Harbours.—Changes in the banks at the entrance to Kaipara Harbour have necessitated the erection of additional beacons, and it is probable that the main beacons will have to be moved before long. At Manukau, too, the banks about the south channel have altered so much that steps have had to be taken to extend the tramways on which the beacons run, so as to be able to give a fair lead into the channel. A new upper beacon has been built, the timber in the old one being decayed. A new road has been made from the signal station to the Blow-hole, the old one being nearly impassable owing to shifting sand. I am afraid that, owing to the same cause, the signal-station will have to be moved before very long. Arrangements have been made with a resident at the mouth of the Rangitikei River to signal vessels bound in and out of that river. At Wairau an artesian well has been bored, from which an ample supply of water is procured. The deepening of the inner bar of the Mokihinui River having been completed, the balance of the amount voted was paid to the company who carried out the work.

Orders in Council.—The following Orders in Council, under the provisions of the Harbours Acts, have been issued during the year :—

- April 8, 1889. Approving plans of middle low training-bank, No. 2, Grey River.
 - April 18. Revoking provision of order requiring H. Sankey to pay £5 for foreshore order.
 - April 18. Fixing rates and dues for the Otamatea County wharves.
 - May 1. Approving plans of dolphins, excavation, reclamation, &c., Calliope Dock, Auckland.
 - May 21. Approving plans of J. H. Williams's wharf, Lowry Bay, Wellington.
 - May 21. Authorising extension of workshops and engine-shed accommodation at Westport.
 - May 21. Authorising addition to W. H. Colbeck's wharf at Batley, Kaipara.
 - June 19. Approving plans of additional reclamation, Te Aro foreshore, Wellington.
 - July 2. Approving plans of Wellington Harbour Board's boat-skids and landing-stage, and Thorndon Yacht Club's club-house and boat-shed, Waterloo Quay, Wellington.
 - July 17. Approving plans of dredging operations at coal-staiths, Westport.
 - July 17. Approving plans of additional mooring between coal-staiths and wharf, Westport.
 - July 17. Revoking orders vesting Havelock Wharf in Pelorus Road Board, and fixing dues.
 - July 17. Vesting management of the Havelock Wharf in the Havelock Town Board.
 - July 17. Abolishing port-charges at Mongonui.
 - August 3. Approving plans of additional baths and bath-houses, St. Clair, Caversham.
 - August 3. Licensing the Caversham Borough Council to occupy foreshore at St. Clair for baths and bath-houses.
 - September 2. Approving plans of the Waitemata Saw-mill landing and timber-slip, Auckland.
 - September 16. Authorising the Westport Harbour Board to make additions to railway-station house, Westport.
 - September 24. Approving plans of extension of middle tee, Queen's Wharf, Wellington.
 - September 24. Approving plans of F. W. Matthews's wharf at Te Koporu, Kaipara.
 - September 24. Licensing F. W. Williams to occupy foreshore near Te Koporu as a site for wharf.
 - September 24. Approving plans of training-wall, west side of Turanganui River, Gisborne.
 - October 2. Approving plans of sloping batter-facing, Te Aro Reclamation.
 - October 2. Approving plans of New Brighton Pier Company's wharf, New Brighton.
 - October 2. Licensing New Brighton Pier Company to occupy foreshore at New Brighton as a site for wharf.
 - October 2. Approving plans of county wharf at Wainui, Akaroa Harbour.
 - October 2. Licensing Akaroa County Council to occupy foreshore at Wainui as a site for wharf.
 - October 25. Approving plans of D. Christie's boat-building skid, Clyde Quay, Wellington.
 - October 30. Approving plans of Northern River Steam Navigation Company's slip at Helensville.
 - October 30. Licensing Northern River Steam Navigation Company to occupy foreshore at Helensville as a site for slip.
 - October 30. Approving plans of Kauri Timber Company's booms across the Waihou River, Thames.
 - October 30. Licensing Kauri Timber Company to occupy site for booms, Waihou River, Thames.
 - November 20. Approving plans of extension of middle training-wall and cattle-wharf, Grey-mouth.
 - November 20. Approving plans of staging on seaward face of Jervois Quay, Wellington.
 - November 20. Fixing dues and rates of Otamatea County wharves.
 - November 20. Approving of Thames Harbour Board licensing R. E. Williams and others to use portion of foreshore for working tailings.
 - December 24. Approving plans altering direction of Gisborne Breakwater.
 - January 9, 1890. Fixing dues for use of J. Webster's wharf at Opononi.
 - January 23. Approving plans of retaining-wall to retain refuse from Destructor, Wellington.
 - January 27. Approving plans of Wellington Rowing Club's boat-skids.
 - February 13. Amending dues and rates for use of Kaikoura Wharf.
 - February 27. Approving plans of extension of Wool Jetty, Wellington Harbour.
 - March 7. Fixing dues for the use of the Motupipi and Waitapu Wharves.
 - March 15. Approving plans of dredging operations at Cattle Wharf, Westport.
 - March 28. Approving plans of extension of Cape Foulwind Railway and building bridge over river.
 - March 28. Approving plans of Masfield Brothers' wharf at Batley.
 - March 28. Licensing Masfield Brothers to occupy foreshore at Batley as a site for wharf.
 - March 28. Vesting the management of the Raglan Wharf in the Raglan County Council.
 - March 28. Fixing dues for Raglan Wharf.
- Notices to Mariners.*—Thirty-six Notices to Mariners were issued during the year, of which sixteen related to matters within the colony. The following is a list of them :—
- Cuvier Island Lighthouse (three notices).
 - Napier Harbour: Exhibition of lights on outer end of Western Pier, entrance to Inner Harbour.
 - Westport Harbour: Dredging operations, Buller River.
 - Timaru Harbour: Position of "Lyttelton."
 - Kaipara Harbour: Directions for clearing Tory Shoal.
 - Auckland Harbour: Approaches to Hobson Street Wharf and Quay Street Jetty No. 2.
 - Napier Harbour: Buoys placed to mark foundations, &c., of breakwater.

Nelson Harbour: Exhibition of lights on extension of Railway Wharf.

Wellington Harbour: Position of wreck of "Willie McLaren."

Manukau Harbour: Signals for Main Channel.

West Coast Sounds: Rock reported between Thompson Sound and Doubtful Sound (two notices).

Nelson Harbour: Change of colour of lower leading beacon.

Manukau Harbour: Construction of new upper beacon on South Head.

Light-dues.—The sum of £15,330 15s. 2d. was received for light-dues for the year, as against £13,463 0s. 11d. in the preceding year. This includes the sum of £2,291 0s. 5d. paid by the Post and Telegraph Department in respect of dues remitted on the San Francisco, New Zealand Shipping, and Shaw-Savill and Albion Companies' steamers. A further sum of £637 7s. 11d. was also received from the Post Office during the year, but is not included in the receipts for the current year, as it should have been paid in during the previous year, and it was included, for statistical purposes, in the receipts for that year. The light-dues included the sum of £3,657 15s. 10d. paid in respect of coasting-vessels.

Government Steamers.—The "Stella" was laid up on the 13th May last. The new boilers manufactured for the "Hinemoa" were placed on board and the whole of the machinery was overhauled, the total cost being £7,585 8s. 6d., and the vessel began to run at the end of April, last year. Since that date she has been employed on the general work of the department. She made two trips to the Antipodes, Bounty, Campbell, and Auckland Islands, the first in July and the second in January last, and also went to the Kermadecs in August. The various dépôts for the benefit of castaways were all examined. Since the "Hinemoa" has been running the piston-rings of the high-pressure cylinder have given way on two occasions, the first time necessitating the reborring of the cylinder. They are, however, now working well. During the year the vessel steamed 26,725 miles, was 3,106 hours under steam, burnt 1,589 tons of New Zealand coal, landed 2,101 tons of cargo, and cleaned and overhauled 161 buoys. The new intermediate shaft for the "Stella" was completed by the Railway Department, and is now ready for putting in should she be required to run again.

Examination of Masters, Mates, and Engineers.—One hundred and twenty-five candidates passed their examination for certificates of competency, and twenty-eight failed. Of those who passed, ninety-one were masters, mates, and engineers of seagoing vessels; and thirty-four were masters and engineers of river-steamers. Only one candidate failed to pass the colour-test examination as against three the previous year. Only one certificate of service was issued during the year, and that as a mate in the foreign trade.

Relief of Distressed Seamen.—During the past year the sum of £171 2s. 9d. has been expended on account of the relief of distressed seamen. Of this amount, £9 9s. has been paid for passages of the crew of the "Ada C. Owen" from Tahiti, and £3 3s. for the crew of the "Daisy" from Haapai. A further sum of £20 has been expended in searching the Three Kings for castaways. In replenishing the dépôts for castaways on the Auckland, Campbell, and Antipodes Islands, and for the purpose of establishing dépôts on Macquarie Islands, a sum of £128 10s. has been spent; and £10 0s. 9d. on the dépôts in the Kermadec Group. £39 3s. has also been expended for the conveyance of the crew of the "Flying Venus," of Liverpool, from Samoa to Auckland; but this amount has been refunded by the Board of Trade.

Wages and Effects of Deceased Seamen.—During the year the estates of thirty-three deceased seamen have been dealt with: £87 1s. 10d. has been paid to relatives or creditors, and £59 10s. 8d. paid into the Public Account in accordance with the provisions of section 87 of "The Shipping and Seamen's Act, 1877." Ten new estates were received during the year.

Survey of Steamers.—Certificates of survey under "The Shipping and Seamen's Act, 1877," have been issued to 193 steamers, of 31,595 aggregate tonnage and 10,627-horse power; as against 185 steamers, of 30,302 aggregate tonnage and 10,690-horse power, last year. A certificate of exemption from survey and from the employment of a certificated engineer was issued during the year for the s.s. "Tarora," under the provisions of section 201 of "The Shipping and Seamen's Act, 1877," and subsection (2) of section 2 of "The Shipping and Seamen's Act 1877 Amendment Act, 1885."

"The Shipping and Seamen's Act Amendment Act, 1889," provided that steamers need only be surveyed once a year, and the schedule gave the maximum fees to be charged. The Minister has accordingly fixed a scale of fees to be charged in respect of a six or twelve months' certificate. The Governor has also made a regulation declaring that every steamer having non-condensing engines, which plies at any time in salt or brackish water, shall be surveyed at least once in every six months.

The Committee appointed by the Board of Trade, in pursuance of "The Merchant Shipping (Life-saving Appliances) Act, 1888," have reported to that Board, and have prepared rules for boats and other life-saving appliances to be carried by vessels, which rules have been made by the Board of Trade. As soon as a copy of the rules was received His Excellency the Governor was advised to make similar rules to apply to vessels trading in the colony, and this was done on the 10th December last. Steamers and sailing-vessels are divided into various classes, according to the trade they are employed in, and whether they carry passengers or not, and the rules fix the boats, &c., to be carried by each class. In all cases the rules provide that a certain number of boats shall be kept under davits; that additional appliances must be kept to a certain fixed amount, proportionate to the tonnage of the vessel, but in no case is a vessel required to carry more boats, &c., than can accommodate her crew and passengers. The rules also provide that a life-jacket shall be carried for every person on board, in addition to a supply of life-buoys.

Wrecks and Casualties.—The accompanying table shows an analysis of the casualties reported. Those on the coast of the colony number 39, representing 15,952 tons, as against 50 casualties, affecting 10,024 tons, in the previous year. There is again a decrease in the number of total

wrecks within the colony, 12 vessels, of 2,464 aggregate tonnage, being lost, as against 14 vessels, of 2,991 aggregate tonnage, in the previous year. There is again, also, a decrease in the number of lives lost during the year, being 25, as against 31 in the previous year; those lost in the colony being 15, as against 19 last year. Of the lives lost on or near the coasts of the colony, 2 were lost from the "Zillah," 2 in the s.s. "Maitai," 8 in the "Emilie," 1 from the "Enterprise," and 2 from the s.s. "Rotorua" (1 on two separate occasions, both suspected suicides); of those lost beyond the colony, 2 were lost from the "Otago," and 1 each from the "Circe," "Blair Drummond," "Devonport," "Cora," "Marlborough," "Invercargill," "Peri," and s.s. "Tongariro."

Of the miscellaneous casualties reported only two were of a serious character—viz., those to the "Otago" and the "Beltana." The former was badly damaged by heavy seas and lost two of her crew while on her voyage from Sydney to London, and put into Lyttelton to refit. The latter also put into Lyttelton, while on her voyage from Port Adelaide to London, her cargo of wool being on fire.

Wreckage of the "County of Carnarvon," a missing vessel, bound from Newcastle, New South Wales, to San Francisco, having been found washed ashore in Spirits Bay, the s.s. "Staffa," was despatched to search the Three Kings for castaways or any trace of wreckage; but nothing was found.

FISHERIES.—*Oysters*: The oyster-beds at Coromandel and in the Hauraki Gulf and Bay of Islands were opened at the beginning of the season. I desire again to draw attention to the desirability of legislating so as to preserve our oyster-beds, and more particularly the rock-oysters, from entire destruction. The facility that exists for taking the rock-oysters renders the process of their destruction comparatively an easy one. It would appear that one of the most feasible means of preserving the oysters would be to lease the beds, subject to strict conditions as to maintaining them in full bearing. At present the only practical way to preserve them is to close them entirely. This is effectual as long as it lasts; but, once the beds are opened they are rushed, and in a few months the benefit gained by keeping them closed for years is lost.

Imported Fish.—The fry of the salmon-ova referred to in last year's report were duly placed in the Aparima River, about 265,000 having been placed in that river last season, or about 474,000 in all since the first were liberated there in 1874. It is to be hoped that salmon have been established in this river, but nothing is certain as yet. As stated in last year's report, a sum of £150 has been paid to the fishermen at Riverton as compensation to them for having closed the river for all kinds of fishing. In order to allow the salmon to have every chance, it would be most desirable not to relax the prohibition against fishing in the Aparima or its branches until it is quite certain that the introduction of salmon is either a success or a failure. In the former case fishing should only be allowed under special regulations.

Seals.—The close season for seals was, on the 24th December last, extended until the 31st December next. In connection with the sealing question, the Imperial Government were asked to take the necessary steps to have the British flag hoisted and the Queen's sovereignty proclaimed over the Macquarie Islands, with the view of their being annexed to New Zealand. Authority was received from the Secretary of State for the Colonies to declare Her Majesty's sovereignty over them. The "Hinemoa" was about to be despatched to carry this into effect; but a communication was received from Tasmania to the effect that these islands were included in the jurisdiction of the Governor of that colony. Steps are being taken to have the jurisdiction transferred to New Zealand.

Inspection of Machinery.—An Order in Council was made authorising a discount of 25 per cent. on all fees (except the maximum fee) if paid within a month after the issue of the certificate. This came into force on the 1st January last, and has proved a relief to the owners of machinery, and a saving of trouble to the department, as the fees are now paid much more promptly. An additional Inspector was appointed in August last, and it is hoped that before long the arrears of inspection will be overtaken.

Returns.—The usual returns, and reports by Inspectors of Machinery, will be found appended hereto.

I have, &c.,

LEWIS H. B. WILSON,

Assistant-Secretary.

The Hon. the Minister having charge of the Marine Department, &c.

RETURN showing the Total Ordinary Expenditure of the Marine Department during the Financial Year ended the 31st March, 1890.

Nature of Expenditure.	Details.	Totals.	Grand Totals.
HEAD OFFICE:—	£ s. d.	£ s. d.	£ s. d.
Assistant Secretary	400 0 0		
Senior Clerk	240 0 0		
Clerk	190 0 0		
Nautical Adviser	300 0 0		
		1,130 0 0	1,130 0 0
HARBOURS:—			
Manukau,—			
Salaries	310 0 0		
Road from landing	48 14 9		
Repairs to signal-staff	30 9 10		
Repairs and alterations to beacons	115 19 7		
Contingencies	32 14 7	537 8 9	
Russell,—			
Salaries	174 0 0		
Contingencies	17 9 1	191 9 1	
Hokianga,—			
Salaries	264 0 0		
Contingencies	20 11 7	284 11 7	
Kaipara,—			
Salaries	600 0 0		
Coal for launch	42 18 0		
Leading-beacons	112 1 3		
Contingencies	46 12 3	801 11 6	
Opunake,—			
Salary	25 0 0		
Contingencies	2 4 9	27 4 9	
Foxton,—			
Salaries	280 0 0		
Contingencies	58 19 4	338 19 4	
Ngaitikei,—			
Salary	15 0 0		
Contingencies	6 0 9	21 0 9	
Wairau,—			
Salary	145 0 0		
Sinking artesian well	35 0 0		
Contingencies	19 12 9	199 12 9	
Nelson,—			
Salaries	895 0 0		
Contingencies	72 14 8	967 14 8	
Riwaka,—			
Salary .. .. .	..	6 0 0	
Waitapu,—			
Salary	25 0 0		
Leading-lights	25 0 0		
Contingencies	1 8 6	51 8 6	
Collingwood,—			
Salary of lightkeeper	25 0 0		
Contingencies	11 4 11	36 4 11	
Karamca,—			
Signalman	17 0 0		
Contingencies	0 18 0	17 18 0	
Mokihinui,—			
Improving inner bar	265 0 0		
Contingencies	28 15 6	293 15 6	
Nile River,—			
Signalman .. .. .	..	9 15 0	
Okarito,—			
Salary	50 0 0		
Contingencies	23 13 6	73 13 6	
Okura River,—			
Signalman	5 0 0		
Contingencies	4 13 0	9 13 0	
Akaroa,—			
Salary .. .. .	..	25 0 0	
General harbour contingencies .. .. .	..	240 11 3	4,133 12 10
LIGHTHOUSES:—			
Salaries of keepers	8,067 19 9		
Travelling-expenses of keepers	19 9 2		
Oil	1,239 0 7		
Stores and contingencies	1,460 3 2		
Pension of Mrs. Deck	24 0 0		
Lighthouse artificer	47 4 6	10,854 12 11	
			10,854 12 11
Departmental travelling-expenses .. .. .	..	34 9 1	
Sundries .. .. .	..	53 16 0	
Charts .. .. .	..	41 9 1	
Inquiries into wrecks and casualties .. .. .	..	98 2 7	
Administration of Fisheries Acts .. .. .	..	76 12 11	
Relief of distressed New Zealand seamen .. .. .	..	171 2 9	475 12 5
			16,593 18 2
Carried forward .. .. .	..	..

RETURN showing the Total Ordinary Expenditure of the Marine Department—*continued*.

Nature of Expenditure.	Details.	Totals.	Grand Totals.
	£ s. d.	£ s. d.	£ s. d.
Brought forward .. .. .	..	..	16,593 18 2
Inspection of Machinery and Survey of Steamers,—			
Salaries of Inspectors	2,142 14 10		
Travelling-expenses	894 2 5		
Contingencies	68 19 7	3,105 16 10	
Examination of Masters and Mates,—			3,105 16 10
Salaries	425 0 0		
Contingencies	63 17 5	488 17 5	
"Stella," s.s.,—			488 17 5
Wages, stores, provisions, &c.	906 6 2		
Less amount earned by steamer	53 4 6	853 1 8	
"Hinemoa," s.s.,—			853 1 8
Repairs and alterations	3,125 13 4		
Wages, stores, provisions, &c.	6,693 4 3	9,818 17 7	
Less amount earned by steamer		362 16 11	
Introduction of fish-ova .. .. .	..	..	9,456 0 8
Guaranteed interest to Wellington Patent Slip Company .. .. .	..	..	964 9 4
Grant for Moeraki sea-baths .. .. .	..	..	2,149 11 3
Survey of Poverty Bay .. .. .	..	..	50 0 0
			13 14 0
Less amount of credits to votes .. .. .	..	..	33,675 9 4
			516 17 7
Total .. .. .	..	..	£33,158 11 9

RETURN showing the Cost of Maintenance of the New Zealand Lighthouses, and the Quantity of Oil consumed at each, during the Year ended the 31st March, 1890.

Name of Lighthouse.	Salaries.	Oil.		Stores and Contingencies.	Totals.
	£ s. d.	Gallons consumed.	Value.	£ s. d.	£ s. d.
Cape Maria van Diemen	360 0 0	867	65 0 6	84 13 1	509 13 7
Moko Hinou	350 16 8	812	60 18 0	53 15 7	465 10 3
Tiri-Tiri	260 0 0	515	38 12 6	41 8 4	340 0 10
Bean Rock	168 6 8	56	4 7 4	33 5 7	205 19 7
Ponui Passage	170 0 0	80	6 0 0	7 6 7	183 6 7
Cuvier Island*	209 14 10	556	41 14 0	30 7 8	281 16 6
Portland Island	362 17 6	685	51 7 6	64 9 11	478 14 11
Napier Bluff	36 0 0	Gas	17 11 0	0 2 0	53 13 0
Pencarrow Head	277 10 0	930	69 15 0	66 14 0	413 19 0
Somes Island	126 12 11	199	14 18 6	17 19 11	159 11 4
Cape Egmont	231 2 9	492	36 18 0	76 1 0	344 1 9
Manukau Head	250 0 0	512	38 8 0	40 18 8	329 6 8
Manukau South Head leading-lights .. .. .	..	140	10 10 0		
Manukau North Head leading-lights	121 13 4	202	15 3 0	27 18 2	175 4 6
Kaipara Head	236 8 6	559	41 18 6	80 1 0	358 8 0
Brothers	476 15 11	666	49 19 0	86 0 7†	612 15 6
Tory Channel leading-lights	90 0 0	168	12 12 0	5 3 8	107 15 8
Cape Campbell	244 3 4	500	37 10 0	67 6 3	348 19 7
Godley Head	270 16 8	496	37 4 0	29 15 6	337 16 2
Akaroa Head	280 10 0	648	48 12 0	30 13 9	359 15 9
Moeraki	282 10 0	570	42 15 0	46 2 2	371 7 2
Taiaroa Head	284 3 4	572	42 18 0	25 11 11	352 13 3
Cape Saunders	280 0 0	529	39 13 6	41 12 10	361 6 4
Nugget Point	293 6 8	861	64 11 6	54 19 7	412 17 9
Waipapapa Point	250 0 0	516	38 14 0	39 10 9	328 4 9
Dog Island	366 6 2	725	54 7 6	78 4 8	498 18 4
Centre Island	317 16 2	898	67 7 0	110 15 8	495 18 10
Puysegur Point	336 13 4	970	72 15 0	106 7 5	515 15 9
Hokitika	6 5 0	Gas	16 17 6	..	23 2 6
Cape Foulwind	299 3 4	552	41 8 0	28 16 5	369 7 9
Farewell Spit	330 0 0	526	39 9 0	64 19 4	434 8 4
Nelson	298 6 8	223	16 14 6	11 9 4	326 10 6
French Pass	200 0 0	123	9 4 6	7 11 10	216 16 4
Totals	8,067 19 9	16,092	1,245 13 10	1,460 3 2	10,773 16 9

* Lighted 22nd September, 1890.

† Of this amount, £40 6s. 1d. is for provisions.

RETURN showing the Cost of Erection of the
New Zealand Coastal Lighthouses.

Name of Lighthouse.	Cost of Erection.		
	£	s.	d.
Pencarrow Head	6,422	0	4
Nelson	2,824	8	9
Tiri-Tiri	5,747	7	2
Mana Island*	5,513	0	1
Taiaroa Head	4,923	14	11
Godley Head	4,705	16	4
Dog Island	10,480	12	8
Farewell Spit	6,139	11	8
Nugget Point	6,597	3	7
Cape Campbell	5,619	2	6
Manukau Head	4,975	2	4
Cape Foulwind	6,955	9	1
Brothers	6,241	0	0
Portland Island	6,554	14	5
Moeraki	4,288	13	2
Centre Island	5,785	19	0
Puysegur Point	9,958	19	5
Cape Maria van Diemen	7,028	14	8
Akaroa Head	7,150	6	5
Cape Saunders	6,066	6	3
Cape Egmont†	3,353	17	11
Moko Hinou	8,186	5	0
Waipapapa Point	5,969	18	11
Ponui Passage‡ .. .. .	..	..	..
Kaipara Head	5,571	8	0
French Pass	1,427	17	5
Cuvier Island	7,406	16	11
Cost of telegraph cable to Tiri-Tiri	1,085	19	6
Miscellaneous and unallocated	1,322	2	2
Total	£158,302	8	7

* Light discontinued; moved to Cape Egmont.

† Cost of iron tower, lantern, and apparatus, which were removed from Mana Island, is not included in this.

‡ Built by Provincial Government of Auckland; cost not known in Marine Department.

RETURN showing the Amount of Light-dues
collected during the Year ended the 31st
March, 1890.

Port.	Amount collected.		
	£	s.	d.
Auckland	3,339	8	3
Onehunga	83	10	7
Whangarei	46	14	1
Whangaroa	26	4	4
Russell	148	15	11
Mongonui	8	10	10
Hokianga	37	8	8
Kaipara	372	12	9
Thames	47	16	6
Coromandel	19	10	10
Tauranga	28	18	0
Poverty Bay	170	10	10
Napier	674	10	1
New Plymouth	104	13	8
Waitara	4	15	8
Wanganui	56	16	7
Patea	6	19	6
Wellington	3,371	9	9
Wairau	24	12	0
Pictou	113	17	9
Nelson	296	1	3
Westport	192	1	1
Greymouth	167	19	2
Hokitika	16	1	9
Lyttelton	1,974	12	3
Timaru	277	7	11
Oamaru	351	1	3
Dunedin	1,879	0	11
Invercargill	18	10	11
Bluff	1,470	2	1
Total	£15,330	15	2

RETURN showing the Amount of Pilotage, Port
Charges, &c., collected during the Year ended
the 31st March, 1890.

Name of Port.	Pilotage.	Port Charges, &c.	Total.
	£ s. d.	£ s. d.	£ s. d.
Auckland*	329 7 3	1,395 0 2	1,724 7 5
Onehunga	3 3 10	132 1 3	135 5 1
Whangarei .. .. .	..	45 3 6	45 3 6
Russell	3 1 6	..	3 1 6
Mongonui .. .. .	..	12 0 6	12 0 6
Hokianga	44 12 3	..	44 12 3
Kaipara	289 1 6	613 2 4	902 3 10
Thames*	39 15 0	..	39 15 0
Gisborne*	52 15 2	527 4 8	579 19 10
Wairoa*	82 16 8	4 0 0	86 16 8
Napier*	2,050 7 8	1,108 10 3	3,158 17 11
New Plymouth*	52 18 6	39 5 11	92 4 5
Waitara*	50 5 2	19 19 9	70 4 11
Wanganui*	332 6 4	..	332 6 4
Patea*	27 13 2	5 10 0	33 3 2
Foxton	186 5 11	..	186 5 11
Wellington*	922 2 9	3,859 8 8	4,781 11 5
Wairau	242 15 11	..	242 15 11
Nelson	1,041 19 10	..	1,041 19 10
Hokitika*	3 11 4	..	3 11 4
Lyttelton*	3,627 9 10	2,685 13 5	6,313 3 3
Timaru* .. .. .	..	814 10 11	814 10 11
Oamaru*	685 15 0	681 14 9	1,367 9 9
Dunedin*	3,975 15 4	3,480 1 1	7,455 16 5
Invercargill*	11 5 6	20 17 3	32 2 9
Bluff*	1,005 13 6	669 9 10	1,675 3 4
Totals	15,060 18 11	16,113 14	31,174 13 2

* Harbour Board revenue.

RETURN showing Expenditure on New Light-
houses, &c., out of Public Works Loan,
during the Year ended the 31st March,
1890.

Nature of Expenditure.	Amount.
	£ s. d.
Cuvier Island Lighthouse	1,551 11 4

RETURN showing the Fees, &c., received under
the Shipping and Seamen's Act, the Merchant
Shipping Act, the Inspection of Machinery
Act, and for Pilotage and Port Charges,
&c., during the Year ended the 31st March,
1890.

Nature of Receipts.	Amount.
	£ s. d.
Shipping and Seamen's Act—	
Fees for shipping and discharge of sea-	
men, and sale of forms	873 13 0
Survey of steamers	1,275 13 0
Examination of masters, mates, and	
engineers	160 10 0
Light-dues	15,330 15 2
Merchant Shipping Act	62 11 6
Inspection of Machinery Act	4,015 0 6
Pilotage and port charges	2,613 8 4
Sundry receipts under Harbours Acts	83 10 0
Sundries	63 18 6
Total	24,479 0 0

DESCRIPTIVE RETURN of New Zealand Coastal Lighthouses.

Name of Lighthouse.	Order of Apparatus.	Description.	Period of Revolving Light.	Colour of Light.	Tower built of	Dwellings built of	Date first lighted.
Cape Maria van Diemen	1st order dioptric	Revolving	1'	White ..	Timber	Timber	24 Mar., 1879
Moko Hinou	1st order dioptric	Fixed	..	Red, to show over Columbia Reef	..	..	..
Tiri-Tiri..	2nd "	Flashing	10"	White ..	Stone	Timber	18 June, 1883
Ponui Passage	2nd "	Fixed	..	White, with red arc over Flat Rock	Iron	"	1 Jan., 1865
Cuvier Island	5th "	Revolving	30"	White and red ..	Timber	"	29 July, 1871
Portland Island	1st "	Revolving	30"	White ..	Iron	"	22 Sept., 1889
Pencarrow Head	2nd "	Fixed	..	Red, to show over Bull Rock	Timber	"	10 Feb., 1873
Cape Egmont	2nd order dioptric	"	..	White ..	Iron	Timber	1 Jan., 1859
Manukau Head	2nd "	"	..	" ..	Timber	"	1 Aug., 1881
Kaipara Head	3rd "	"	..	" ..	"	"	1 Sept., 1874
Brothers	2nd "	Flashing	10"	" ..	"	"	1 Dec., 1884
Cape Campbell	2nd "	Fixed	10"	Red, to show over Cook Rock	..	..	24 Sept., 1877
Godley Head	2nd order dioptric	Revolving	1'	White ..	Timber	Timber	1 Aug., 1870
Akaroa Head	2nd "	Fixed	..	" ..	Stone	Stone	1 April, 1865
Mooraki	2nd "	Flashing	10"	" ..	Timber	Timber	1 Jan., 1880
Taiaroa Head	3rd "	Fixed	..	" ..	"	"	22 April, 1878
Cape Saunders	3rd "	"	..	Red ..	Stone	Stone	2 Jan., 1865
Nugget Point	2nd "	Revolving	1'	White ..	Timber	Timber	1 Jan., 1880
Waipapapa Point	1st "	Fixed	..	" ..	Stone	Stone	4 July, 1870
Dog Island	2nd "	Flashing	10"	" ..	Timber	Timber	1 Jan., 1884
Centre Island	1st order catadioptric	Revolving	30"	" ..	Stone	Stone	1 Aug., 1865
Puysegur Point	1st order dioptric	Fixed	..	White, with red arcs over inshore dangers	Timber	Timber	16 Sept., 1874
Cape Foulwind	1st "	Flashing	10"	White ..	"	"	1 Mar., 1879
Farewell Spit	2nd "	Revolving	30"	" ..	"	"	1 Sept., 1876
Nelson	2nd "	"	1'	White, with red arc over Spit end	"	"	17 June, 1870
French Pass	4th "	Fixed	..	White, with red arc to mark limit of anchorage	Iron	"	4 Aug., 1862
	6th "	"	..	Red and white, with white light on beacon	"	"	1 Oct., 1884

RETURN of Steamers to which Certificates of Survey were issued in New Zealand during the Year ended the 31st March, 1890.

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Ahuriri ..	31	17	Compound ..	Screw ..	Extended river	
Akaroa ..	43	28	" ..	" ..	" ..	
Alexandra ..	73	30	Non-condensing	Paddle ..	River "	
Alice ..	3	4	"	Screw ..	" ..	New launch.
Ant ..	5	6	"	" ..	" ..	"
Antrim ..	36	30	"	Paddle ..	" ..	
Aorere ..	45	16	Compound ..	Screw ..	Sea-going	
Arawata ..	623	600	" ..	" ..	" ..	
Australia ..	260	77	" ..	" ..	" ..	
Awarua ..	100	80	" ..	Paddle ..	" ..	Tug.
Awhina ..	5	50	" ..	Screw ..	" ..	
Banks Peninsula	34	62	" ..	Twin-screw ..	" ..	New steamer.
Barstow ..	32	24	Non-condensing	Paddle ..	River	
Beautiful Star ..	146	30	Compound ..	Screw ..	Sea-going	
Bella ..	12	12	Non-condensing	" ..	Extended river	
Ben Lomond ..	33	15	Compound ..	" ..	River	
Birkenhead ..	55	16	Non-condensing	Paddle ..	" ..	
Blanche ..	18	9	"	Screw ..	" ..	
Britannia ..	108	40	"	Paddle ..	" ..	
Brunner ..	333	95	Triple expanse	Screw ..	Sea-going	
Cairntoul ..	1,071	155	" ..	" ..	" ..	New steamer.
Canterbury ..	..	24	Non-condensing	Twin-screw ..	Extended river	
Charles Edward ..	123	60	Compound ..	Screw ..	Sea-going	
Chelmsford ..	70	24	" ..	" ..	" ..	
City of Cork ..	42	46	Non-condensing	Paddle ..	River	
Clansman ..	336	99	Compound ..	Screw ..	Sea-going	
Clematis ..	5	4	Non-condensing	Stern-wheel	River ..	New steamer.
Colleen ..	33	18	Compound ..	Paddle ..	River	
Coromandel ..	68	25	" ..	Screw ..	Extended river	
Cygnets ..	3	3	Non-condensing	" ..	River ..	New launch.
Daphne ..	1	2	"	" ..	" ..	Launch.

RETURN of Steamers to which Certificates of Survey were issued—*continued.*

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Despatch	24	20	Compound ..	Screw ..	Extended river	First N.Z. survey
Dingadee	393	80	" ..	Twin-screw ..	Sea-going ..	"
Douglas	60	20	Condensing ..	Screw ..	" ..	"
Durham	54	30	Compound ..	" ..	Extended river	"
Eagle	138	70	" ..	Paddle ..	River	"
Edina	9	6	Non-condensing	Screw ..	" ..	"
Effort	13	12	Compound ..	Paddle ..	Extended river	Launch.
Elsie	15	8	Non-condensing	Screw ..	" ..	"
Enterprise No. 2 ..	61	30	" ..	Paddle ..	" ..	"
Erin	4	4	" ..	Screw ..	River ..	Launch.
Fairy	33	15	" ..	" ..	Extended river	"
Fingal	23	11	Condensing ..	" ..	" ..	"
Gairloch	211	85	Compound ..	Twin-screw ..	Sea-going	"
Gleaner	8	8	Non-condensing	Screw ..	River	Launch.
Glenelg	156	75	Compound ..	" ..	Sea-going	"
Grafton	297	123	" ..	Twin-screw ..	" ..	"
Hangchow	999	180	" ..	Screw ..	" ..	First N.Z. survey; left the colony.
Hauroto	1,276	250	" ..	" ..	" ..	"
Herald	370	85	" ..	" ..	" ..	"
Huia	90	25	" ..	" ..	" ..	"
Huia	4	6	Non-condensing	" ..	River ..	Launch.
Ida	12	10	" ..	" ..	" ..	"
Invercargill	123	50	Compound ..	" ..	Sea-going	"
Iona	159	65	" ..	" ..	" ..	"
Iona	61	45	Non-condensing	Stern-wheel	River ..	"
Ivy	8	8	" ..	Screw ..	" ..	New launch.
Jane Douglas	75	22	Compound ..	" ..	Sea-going	"
Janet Nicoll	496	90	" ..	" ..	" ..	"
Kahu	99	40	" ..	" ..	" ..	"
Kaituna	4	4	" ..	" ..	River ..	New launch.
Kakanui	57	22	" ..	" ..	Sea-going	"
Kanieri	115	20	" ..	" ..	" ..	"
Katikati	27	8	Condensing ..	" ..	River ..	"
Kawai	24	24	Non-condensing	" ..	" ..	"
Kawatiri	286	70	Compound ..	" ..	Sea-going	"
Kawau	8	10	" ..	" ..	Extended river	Steam-yacht.
Kennedy	124	43	" ..	Twin-screw	Sea-going	"
Kina	52	15	" ..	Screw ..	River	"
Kiwi	133	30	" ..	" ..	Sea-going	"
Kopuru	28	20	Non-condensing	" ..	River	"
Koputai	5	120	Compound ..	Paddle ..	Sea-going	Tug.
Koranui	301	75	" ..	Screw ..	" ..	Wrecked.
Kotuku	41	40	Non-condensing	Three screws	River	"
La Buona Ventura ..	4	4	" ..	Screw ..	" ..	Launch.
Lady Barkly	39	20	Compound ..	" ..	Extended river	"
Lawrence	246	88	" ..	Twin-screw	Sea-going	First N.Z. survey
Lilie	10	10	Non-condensing	Paddle ..	River	"
Lily	20	12	" ..	Twin-screw	Extended river	"
Little Agnes	83	16	Compound ..	Screw ..	Sea-going	New steamer.
Little George	4	4	Non-condensing	" ..	River ..	Launch.
Lyttelton	39	80	Compound ..	Paddle ..	Sea-going	Tug.
Mahinapua	10	10	Non-condensing	Stern-wheel	River	"
Mahinapua	205	80	Compound ..	Twin-screw	Sea-going	"
Maitai	163	55	" ..	Screw ..	" ..	Wrecked.
Mana	51	25	" ..	" ..	Extended river	"
Manapouri	1,020	300	" ..	" ..	Sea-going	"
Manawatu	112	38	" ..	" ..	" ..	"
Manukau	45	15	" ..	" ..	River	"
Maori	17	8	Non-condensing	" ..	Extended river	"
Mararoa	1,248	530	Triple expansion	" ..	Sea-going	"
Matau	50	40	Non-condensing	Stern-wheel	River	"
Matuku	3	3	" ..	Screw ..	" ..	Launch.
Maud	2	1	" ..	" ..	" ..	New launch.
Mawhera	340	75	Compound ..	" ..	Sea-going	"
May	8	8	Non-condensing	" ..	River ..	Launch.
Minnie Casey	48	25	Compound ..	" ..	" ..	"
Moa	110	33	" ..	" ..	Sea-going	"
Mohaka	20	17	" ..	" ..	Extended river	"
Moss Rose	8	8	Non-condensing	" ..	" ..	Launch.
Mountaineer	66	60	Compound ..	Paddle ..	River ..	"
Moutoa	5	5	Non-condensing	Screw ..	" ..	Launch.
Murray	90	25	Compound ..	" ..	Sea-going	"
Napier	48	30	" ..	" ..	" ..	"
Nautilus (yacht) ..	32	18	" ..	" ..	Extended river	"
Neptune	44	18	" ..	" ..	Sea-going	"
Nile	21	20	Non-condensing	Paddle ..	" ..	"
Noko	15	9	" ..	Screw ..	Extended river	Launch.
No. 222	502	120	Compound ..	Twin-screw	Sea-going	Dredge.
Ohau	411	92	" ..	Screw ..	" ..	"
Omapere	352	80	" ..	" ..	" ..	"
Onslow	20	14	" ..	Twin-screw	River ..	New steamer.
Orawaite	283	70	" ..	Screw ..	Sea-going	"
Oreti	138	50	" ..	" ..	" ..	"
Osprey	138	70	" ..	Paddle ..	River	"

RETURN of Steamers to which Certificates of Survey were issued—*continued*.

Name of Vessel.	Tons Register.	Horse-power of Engines.	Nature of Engines.	Nature of Propeller.	Class of Certificate.	Remarks.
Pearl	9	7	Non-condensing	Screw	Extended river	Launch.
Pelorus	18	12	"	"	River	"
Penguin	442	180	Compound ..	"	Sea-going	"
Phoenix	6	6	Non-condensing	"	Extended river	Launch.
Pioneer	5	5	"	"	River	"
Planet	13	8	"	"	Extended river	"
Plucky	29	40	Compound ..	"	Sea-going	"
Prince of Wales ..	487	21	Condensing ..	"	"	First survey freezing-hulk. Hopper-dredge.
Progress	200	50	Compound ..	"	"	"
Result	13	10	Non-condensing	Paddle	Extended river	"
Result	18	23	"	Screw	"	"
Reynolds .. ..	..	14	"	"	River	Launch.
Richmond	495	105	Compound ..	"	Sea-going	"
Ringarooma	623	300	"	"	"	"
Riro Riro .. ..	..	4	Non-condensing	"	River	Launch.
Rosamond	462	90	Compound ..	"	Sea-going	"
Rose Casey	99	109	"	"	Extended river	"
Rotoiti	17	15	Non-condensing	Fore-and-aft- screws	"	"
Rotomahana	139	45	Condensing ..	Screw	Sea-going	"
Rotomahana	864	450	Compound ..	"	"	"
Rotorua	576	172	"	"	"	"
Rowena	74	30	"	"	"	"
Ruby	19	24	"	"	Extended river	"
Scotchman	30	10	Non-condensing	"	River	"
Snark	12	10	"	"	"	Launch.
Southern Cross ..	158	50	Compound ..	"	Sea-going	"
Spray	3	3	Non-condensing	"	River	Launch.
Staffa	40	20	Condensing ..	"	Extended river	"
Stormbird	137	40	Compound ..	"	Sea-going	"
Sylph	5	4	Non-condensing	"	River	Launch.
Tainui .. ..	..	8	"	"	Extended river	"
Takapuna	370	165	Compound ..	"	Sea-going	"
Takapuna	58	20	Non-condensing	Paddle	River	"
Tam O'Shanter ..	22	12	"	Screw	"	"
Tangihua	20	15	"	"	"	"
Taniwha .. ..	..	16	"	"	"	Dredge.
Tarawera	1,269	250	Compound ..	"	Sea-going	"
Taupo	408	92	"	"	"	"
Tay .. ..	..	5	Non-condensing	"	River	Launch.
Te Anau	1,028	250	Compound ..	"	Sea-going	"
Te Aroha	50	14	Non-condensing	Paddle	River	"
Tekapo	1,544	270	Compound ..	Screw	Sea-going	"
Te Kapu	50	25	"	"	Extended river	New steamer.
Terrier .. ..	..	3	Non-condensing	"	River	Launch.
Terror .. ..	..	10	"	"	Extended river	"
Te Wae .. ..	..	16	"	Twin-screw	River	Dredge.
Theodore	35	25	"	Paddle	"	"
Titan	22	55	Condensing ..	"	Sea-going	Tug.
Tongariro	63	25	"	"	River	"
Torea	9	18	Compound ..	Screw	Extended river	"
Tuhua	46	28	Non-condensing	Stem-wheel	River	"
Tuna .. ..	..	14	Compound ..	Twin-screw	Extended river	New steamer.
Victoria	93	50	Non-condensing	Paddle	River	"
Vivid	6	14	"	Screw	Extended river	"
Waihi	63	20	Compound ..	"	Sea-going	"
Waihora	1,269	250	"	"	"	"
Waikato	56	20	Non-condensing	Paddle	Extended river	"
Wainui	391	95	Compound ..	Screw	Sea-going	"
Waipara	70	30	Non-condensing	Twin-screw	"	"
Wairarapa	1,023	292	Compound ..	Screw	"	"
Wairoa	48	20	Condensing ..	"	Extended river	"
Waitangi .. ..	..	5	Non-condensing	"	River	Launch.
Waitapu	40	16	Compound ..	"	Sea-going	"
Waitara .. ..	..	12	Non-condensing	"	River	"
Waitara	26	16	Compound ..	"	Extended river	"
Waitoa	27	16	"	Twin-screw	Extended river	"
Waiwera .. ..	..	8	"	Screw	River	Launch.
Waiwera	6	15	Compound ..	"	Extended river	"
Wakatipu	1,158	256	"	"	Sea-going	"
Wakatu	95	30	"	"	"	"
Wanaka	278	120	"	"	"	"
Wareatea	288	70	"	"	"	"
Waverley	77	25	"	Twin-screw	"	"
Weka	53	20	"	Screw	"	"
Wellington	262	90	"	"	"	"
Westland	35	64	Condensing ..	Paddle	"	"
Yankee Doodle ..	6	12	Non-condensing	"	River	Launch.
Zephyr	8	12	"	Screw	"	"

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued during the Year ended the 31st March, 1890.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
James Mill	First Mate	Foreign trade	3 April, 1889 ..	469
Malcolm Livingstone	"	"	4 " " ..	458
Norman Ferguson	Master Ordinary	"	1 May, " ..	376
Pierre Hillien	Second Mate	"	1 " " ..	604
John Abrani	"	"	14 " " ..	605
William Brown	First Mate	"	14 " " ..	566
George Urquhart Thomson	Master Extra	"	14 " " ..	534
Thomas Henry Malcolm	Master Ordinary	"	27 " " ..	341
Donald McAllister	"	"	27 " " ..	606
William Douglas Reid	Only Mate	"	27 " " ..	607
Niel Taylor Robertson	"	"	27 " " ..	608
John Abrani	Master Ordinary	"	1 June, " ..	605
Henry Charles Hamand	Second Mate	"	18 " " ..	609
Coll McDonald	"	"	24 " " ..	610
Andrew Watson Simpson	First Mate	"	24 " " ..	611
Joseph Moeller	Master Ordinary	"	24 " " ..	364
Ernest Augustus Browne	"	"	24 " " ..	440
George Alfred Lobb	"	"	24 " " ..	497
Thomas Charles William Ancell	First Mate	(renewal)	8 July, " ..	612
Victor Ferdinand Person	Only Mate	"	8 " " ..	613
Collin Francis Post	First Mate	"	8 " " ..	478
Henry Francis Joynt	Second Mate	"	17 " " ..	614
Valentine Charles Nightingale	Master Ordinary	"	17 " " ..	615
Frederick Charles Laird	Second Mate	"	6 Aug., " ..	616
Charles Nelson	Master Ordinary	"	7 " " ..	617
John Anderson Mitchell	First Mate	"	7 " " ..	618
Ernest Warner Cleveland	Master Ordinary	"	7 " " ..	438
Alfred Ernest Ayscough Reynolds	Only Mate	"	17 " " ..	619
William Palmer Collins	Master Ordinary	"	17 " " ..	512
Grantham Gace	"	"	19 " " ..	487
Henry Arthur Rutter	Only Mate	"	20 " " ..	620
William Bertram Murison	Second Mate	"	2 Sept., " ..	621
Christian Theodor Julius Andersen	"	"	13 " " ..	622
Duncan Cameron	"	"	17 " " ..	623
John Whelehan Crotty	Only Mate	"	19 " " ..	624
Tasman Arthur Gibbons	Second Mate	"	19 " " ..	625
Alfred Stoddart	Master Ordinary	"	1 Oct., " ..	398
David Spence	"	"	1 " " ..	491
Augustus James Hamilton Courbarron	"	"	1 " " ..	626
Thomas Henry Clarkson	"	"	5 " " ..	309
Arthur Henry Adams	Second Mate	"	5 " " ..	627
Maurice Neville Plante	"	"	5 " " ..	628
Murdoch MacPherson	First Mate	"	28 " " ..	629
Owen Williams	"	"	28 " " ..	630
Alexander Stuart	"	"	31 " " ..	631
William Gilmer	Second Mate	"	12 Nov., " ..	632
James Smith	Master Ordinary	"	28 " " ..	633
Frank Newcomb	"	"	10 Dec., " ..	402
Daniel McCallum	Second Mate	"	10 " " ..	634
Charles William Pidgeon	Only Mate	"	12 " " ..	635
Frederick Ferdinand Nilsson	First Mate	"	23 " " ..	636
Matthew Irvine	Master Ordinary	"	31 " " ..	494
Allan Flores Stevenson	"	"	8 Jan., 1890 ..	637
Patrick Marron	First Mate	"	8 " " ..	638
John Alexander Webster	Only Mate	"	8 " " ..	639
Frederic William Cox	Master Ordinary	"	20 " " ..	640
Charles Ludvig Olsen	Only Mate	"	20 " " ..	641
Archibald Brown	First Mate	"	25 " " ..	521
John William Watkins	"	"	14 Feb., " ..	504
Joseph Sadler Gill	Second Mate	"	7 March, 1889 ..	642
Donald McLean	Master Ordinary	"	31 " " ..	409
Frederick Obin	Mate	Home trade(renewal)	19 June 1889 ..	5,332
Edward Shaw	"	"	7 Aug., " ..	5,333
Jacob Jacobson	"	"	23 " " ..	5,334
Edward Graham	Master	"	23 Sept., " ..	5,312
Charles Norden	Mate	"	25 " " ..	5,335
Robert Salter	"	"	26 " " ..	5,336
Richard Fitzgerald	"	"	26 Nov., " ..	5,337
George Archibald Simpson	"	"	18 Dec., " ..	5,338
Frederick Meyer	Master	"	20 Jan., 1890 ..	5,339
Gustav Ericksen	"	River trade	1 May, 1889 ..	3,167
William Palmer	"	"	27 " " ..	3,168
Sivert Holland	"	"	30 " " ..	3,169
Simon Guptill	"	"	7 June, " ..	3,170
George Eccles Watkins	"	"	26 Nov., " ..	3,171
Thomas Osborne	"	"	26 " " ..	3,172
George Young Dennis	"	(renewal)	12 Dec., " ..	3,173
Henry Mitchell	"	"	31 " " ..	3,174
George Wüß	"	"	3 Jan., 1890 ..	3,175
Michael Walsh	"	"	8 " " ..	3,176
Herbert Hilton	"	"	14 Feb., " ..	3,177
Frederick William Fisk	"	"	20 " " ..	3,178
Daniel Anderson	"	"	3 March, " ..	3,179
William Garrett	"	"	20 " " ..	3,180

RETURN of Masters, Mates, and Engineers to whom Certificates of Competency were issued during the Year ended the 31st December, 1890—continued.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
James Stewart	1st Class Engineer	Foreign trade(renewal)	10 April, 1889 ..	189
Edward Barker Mundle	"	"	12 " " ..	186
Thomas Scott	"	"	12 " " ..	157
William John Layton Stephenson	2nd Class Engineer	"	12 " " ..	190
Robert Smith Ross	1st Class Engineer	"	15 " " ..	145
John Brown	"	"	18 " " ..	107
Neil Dickson Hood	"	"	4 May, " ..	187
Robert Burns	"	"	10 " " ..	101
James Russell	2nd Class Engineer	"	10 " " ..	191
James White Dunlop	"	"	28 " " ..	192
William Robertson	"	(renewal)	10 June, " ..	193
George Walker Ross	"	"	22 July, " ..	194
Robert Packer	1st Class Engineer	"	17 Sept., " ..	184
William Gilmour	2nd Class Engineer	"	28 " " ..	195
Charles John Swann	1st Class Engineer	"	28 " " ..	128
Allan Forrest Anderson	2nd Class Engineer	"	28 Oct., " ..	196
Lawrence Frost	"	"	18 Nov., " ..	197
Arnold Fraenkel Levestam	"	"	26 " " ..	198
William Peterson	"	"	9 Dec., " ..	199
Donald McCorquodale	"	"	16 " " ..	200
John Corliss	"	"	14 Feb., 1890 ..	201
Peter Grant	1st Class Engineer	"	14 " " ..	153
John Greig Howarth	2nd Class Engineer	"	1 March, " ..	202
William John Crawford	"	"	1 " " ..	203
John Darling	"	"	10 " " ..	204
John Cook Buchanan	1st Class Engineer	"	20 " " ..	187
Alfred Olaf Sproule	Engineer	River trade	15 April, 1889 ..	1,581
John Bryant	"	"	29 " " ..	1,582
George Wallace	"	"	4 May, " ..	1,583
William Henry Worth	"	"	28 " " ..	1,584
James Brookes	"	(renewal)	18 June, " ..	1,585
John Benjamin Denford	"	"	4 July, " ..	1,586
William Joseph Legg	"	"	17 " " ..	1,587
George James Buck	"	"	30 " " ..	1,588
Thomas William Coulthard	"	"	7 Aug., " ..	1,589
Alfred Everitt	"	"	7 " " ..	1,590
Frederick Nelson	"	"	7 " " ..	1,591
Henry George Dod	"	"	17 Sept., " ..	1,592
Richard Byrne	"	"	28 " " ..	1,593
John Sheddan	"	"	9 Oct., " ..	1,594
William Holden	"	"	31 " " ..	1,595
John Gillard	"	"	16 Nov., " ..	1,596
Frederick William Thorp	"	"	12 Dec., " ..	1,597
John Fraser	"	(renewal)	20 " " ..	1,598
Alfred John Durham	"	"	3 Jan., 1890 ..	1,599
William Bishop	"	"	30 " " ..	1,600
Charlie Kelly	"	"	14 Feb., " ..	1,601
John Wallace King	"	"	24 " " ..	1,602
George Dean	"	"	10 March, " ..	1,603

RETURN showing the Number of Masters, Mates, and Engineers examined during the Year ended the 31st March, 1890, distinguishing the Number of Successful and Unsuccessful Candidates.

Class of Certificate.	Auckland.			Wellington.			Lyttelton.			Dunedin.			Other Places.			Totals.		
	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.	Passed.	Failed.	Total.
Foreign - going masters and mates	16	6	22	14	3	17	5	4	9	24	1	25	..	..	..	59	14	73
Home-trade masters and mates	1	..	1	2	4	6	1	3	4	1	..	1	3	..	3	8	7	15
River-steamer masters	5	..	5	1	1	2	..	..	..	..	..	7	..	..	7	13	1	14
Sca-going engineers	5	1	6	5	..	5	..	..	..	14	..	14	..	..	..	24	1	25
River-steamer engineers	8	3	11	3	..	3	..	..	..	2	1	3	8	1	9	21	5	26
Totals	35	10	45	25	8	33	6	7	13	41	2	43	18	1	19	125	28	153

RETURN showing the Certificates of Service issued to Masters, Mates, and Engineers during the Year ended the 31st March, 1890.

Name of Person.	Rank.	Class of Certificate.	Date of Issue.	No.
Robert Johnson	Mate	Foreign trade	1 February, 1890 ..	2,551

RETURN of Estates of Deceased Seamen received and administered in Pursuance of the Provisions of "The Shipping and Seamen's Act, 1877," during the Year ended the 31st March, 1890.

Name of Seaman.	Balance to Credit of Estate on 31st March, 1889.	Amount received.	Amount paid.	Balance to Credit of Estate on 31st March, 1890.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
James Diamond	5 3 9	..	5 3 9	..
Harry Burke	2 9 5	..	2 9 5	..
John Mosley	0 10 6	..	0 10 6	..
Unknown	0 1 11	..	0 1 11	..
William Warne	1 6 8	..	1 6 8	..
William Nash	0 8 4	..	0 8 4	..
W. J. Hellman	5 0 0	..	5 0 0	..
F. Hoffman	10 4 6	..	10 4 6	..
T. Olsen	4 10 0	..	4 10 0	..
T. M. Cave	3 8 4	..	3 8 4	..
J. Andersen	6 15 6	..	6 15 6	..
J. Symmons	3 12 0	..	3 12 0	..
Peter Oster	3 4 10	..	3 4 10	..
August Johnson	6 10 0	..	6 10 0	..
J. Cailson	0 16 8	..	0 16 8	..
W. H. Potter	0 15 0	..	0 15 0	..
Leon Oliver	1 16 9	..	1 16 9	..
Frank Olliver	2 16 6	..	2 16 6	..
James Murrison	3 8 4	..	3 8 4	..
James Watson	8 4 3	..	8 4 3	..
Joseph Clarke	6 6 0	..	6 6 0	..
Jimmy	29 11 10	..	29 11 10	..
David Rintoul	9 1 11	4 0 0	13 1 11	..
Christian Rissler .. .. .	..	4 14 9	..	4 14 9
James Glass .. .. .	..	7 12 7	3 4 0	4 8 7
George Davy .. .. .	..	1 2 6	1 2 6	..
Alfred George Julier .. .. .	..	1 15 0	1 15 0	..
James Mullen .. .. .	..	2 2 0	2 2 0	..
George Thomas Archer .. .. .	..	4 5 4	4 5 4	..
R. H. Larsen .. .. .	..	8 10 8	8 10 8	..
George Martin .. .. .	..	5 10 0	5 10 0	..
John McKay .. .. .	..	2 7 10	..	2 7 10
Julius Peterson .. .. .	..	7 5 1	..	7 5 1

RETURN of WRECKS and CASUALTIES to SHIPPING reported to the Marine Department from the 1st April, 1889, to the 31st March, 1890.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register Tonnage.	Number of		Nature of		Number of Lives lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew.	Passengers.	Cargo.	Casualty.			Dirac-tion.	Force.		
1880.													
Feb. 10	Gael, 12 years	Schooner	98	6	..	General & copra	Stranded; total loss	..	Reef off Malicoolo Island, New Hebrides	N.E.	Light ..	Vessel drifted on to reef, it being calm, with heavy swell inshore	Peder Gregessen Samiksen.
April 4	Clansman, 10 years	Brigantine	157	7	..	Coal ..	Stranded; total loss	..	Quarter-mile to west of mouth of Turanganui River, Poverty Bay	S.E.	Squally	Casualty caused through chains parting ..	Henry Matheson.
May 4	Ionic, 6 years ..	Four-masted	3070	..	..	General	Crank-shaft broke	..	Lat. 52° 12' S., long. 168° W., bearing N. 56° W.; 926 miles from Godley Heads	N.W.	Strong breeze	The aft crank-shaft became fractured about two-thirds across, and vessel returned to Lyttelton in order to fix spare shaft	William Henry Kidley.
"	14 Circe, 20 years	Schooner	145	7	..	Coal ..	Loss of life only	1	Lat. 44° 33' S., long. 161° 3' E., on voyage from Newcastle to Bluff	S.W.	Fresh gale	An A.B. named Christian Rissler, while engaged aloft in stowing the upper-topsail, fell from the yard on to the deck and was killed	George Francis.
"	14 Australia, s.s., 5 years	Schooner	260	25	12	General	Collision: partial loss	..	Outside Rangitoto Channel, entrance to Auckland Harbour	N.E.	Fresh	Casualty caused by carelessness of master of "Australia" in shaping his course without any regard to the approaching vessels, and in such a manner as to bring them suddenly into a dangerous position. Until collision was imminent he appears to have disregarded the other vessel altogether, taking it for granted she would have to get out of the way, although she was a sailing-vessel with a steam-tug lashed alongside, and had displayed her green light before he altered his course. His certificate was suspended for three months, and he was ordered to pay costs of inquiry	Alfred Labruyere Kemp.
"	14 Awahina, s.s., 4½ years	Cutter ..	5	5	..	..	Collision: partial loss	..					Alexander Campbell.
"	14 Essex (America)	Barque..	630	12	..	Ballast..	Collision: partial loss	..					Alfred Lawrence Shautbe.
"	15 Rose, 29 years..	Cutter ..	25	4	..	Firewood	Stranded; total loss	..	Tryphena Harbour, Great Barrier Island	S.W.	Strong ..	The anchor dragged through force of wind and sea, vessel went on shore and became a total wreck	Manuel Ignacio Soares.
"	17 Coralie, 15 yrs.	Cutter ..	29	..	..	Sawn timber and drain-pipes	Stranded; partial loss	..	Little Mahia..	S.	Gale ..	Vessel ran in for shelter, and wind changing, anchor broke, and master had to run her ashore	Peter Brown.
"	19 Coriolanus, 12½ years	Barque..	1045	..	..	General	Stranded; no damage	..	About 14 miles off Abrothos Lighthouse, Brazil	..	..	Vessel touched something. Soundings taken shortly after, but no bottom found	John Theodor Parkilsen.
"	22 Cabarfeidh, 15 years	Barque..	333	12	..	Timber..	Stranded; partial loss	..	Entrance to Kaipara Harbour	E.S.E.	Light breeze	Vessel took the ground outside Tory Shoal when going out of harbour	Charles Thow.
May 25	Mo'a, s.s., 3 years	Schooner	110	..	..	Cattle and sheep	Stranded; partial loss	..	Near the Head's wharf, Wanganui River	..	..	Vessel refused to answer her helm, and grounded on stones	Oscar Jarman.
"	27 E. U. Cameron, 21 years	Schooner	41	3	..	Ballast..	Stranded; total loss	..	Te Wae Point, Bluff Harbour	W.S.W.	Strong breeze	Vessel missed stays when tacking, and anchor was let go, but did not hold	Frederick England.
"	31 Australia, s.s., 5 years	Schooner	260	24	12	General	Stranded; slight damage	..	Near Awamui Reef, 10 miles S.W. from East Cape	S.E.	Fresh breeze	Vessel touched on rock when calling at Awamui landing-place	John Henning Johnson.

June	2	Maitai, s.s., 4 years	Schooner	163	21	7	General	Stranded; total loss	2	On rock off Red Mercury Island	N.E.	Strong ..	Vessel lost on rock at or near spot marked on chart as Richards Rock, but Court has no means of determining whether chart is correct. Court considered it unsatisfactory to be able to come to no certain conclusion as to exact position of rock, but considering evidence did not justify it in imputing negligence or want of care to master or officers.	William Darling Dawson.
"	2	Zillah, 11 years	Ketch ..	36	4	1	General	Stranded; total loss	2	Kerititi, east side Great Barrier Island	S.E.	Strong ..	Vessel struck on rock off Kerititi Bay, Great Barrier, and became total wreck, master and mate both drowned. Apparently master had lost his reckoning	John Lena.
"	8	Oregon, 13 years	..	27	..	..	..	Stranded; total loss	..	Mokau Bar ..	N.W.	Gale ..	This vessel, formerly a paddle-steamer, having been dismantled and sold to Mokau Coal Company, when being towed to Mokau by s.s. "Rowena," was capsized, and became a total wreck near the bar of that river	..
"	14	Blair Drummond, 15 years, Al Lloyd's	Ship ..	1450	26	..	General	Loss of life only	1	On voyage from London to Auckland, lat. 41° S., long. 84° E.	W.S.W.	F r e s h breeze	An A.B., T. Vicenza, while engaged at work on the maintop-gallant yard fell into the sea and was drowned	John Hall.
"	25	Isabella Anderson, 14 years	Schooner	79	5	..	Produce & general	Stranded; total loss	..	Mouth of Hokitika River	N.E.	Moderate breeze	Vessel, through misfortune, touched tail of outer bank, and, when floated off, sea took her across the channel on to the beach before way could be got on her	Jacob Eckhoff.
July	17	Enterprise, 22 years	Schooner	84	5	..	General	Loss of life only	1	Off east coast, South Island, between Banks Peninsula and Otago Peninsula	..	H e a v y wind with squalls	An O.S. named Alfred Fuller, while engaged aloft making fast the foresail, fell overboard and was lost	Archibald Bell.
"	23	Devonport, 11 years	Schooner	291	9	..	Ballast..	Loss of life only	1	Lat. 36° 38' S., long. 173° E.	E.	Gale ..	While wearing ship main boom jibed, and a seaman named John McKey was entangled in the peak down-haul, fell overboard, and was drowned	George Greenwood.
"	27	Sarah Pile, 25 years	Schooner	115	6	..	Timber..	Stranded; no damage	..	Tory Shoal, off Kaipara Harbour	..	Calm ..	Wind fell when vessel was crossing bar, and she then drifted into breakers	Ritchie Watt.
Aug.	24	Otago, 20 years	Barque..	993	20	2	C o p r a, tallow, wool, &c.	Deck swept; rudder carried away; saloon and pantry gutted by heavy seas	2	About lat. 50° 6' S., long. 163° 21' W., South Pacific, on voyage from Sydney to London	N.N.W.	S t r o n g gale	Casualty not caused by fault of captain. If he had taken liquor after accident he had not taken enough to incapacitate him. Chief mate did not support master as he ought. Ship was ill-found when she left Sydney	Henry Norman.
"	31	Cora, 22 years..	Schooner	46	7	..	General Island produce	Loss of life only	1	On voyage to Rarotonga	..	..	The mate, George Martin, fell overboard and was drowned	Henry Abbott.
Sept.	6	Flying Venus, 34 years, 3/8 Veritas	Barque..	1660	22	4	Timber..	Stranded; total loss	..	Reef off Penrhyn Island, South Pacific	N.E.	Moderate	Master was making for Penrhyn Island to adjust chronometer when vessel struck on reef	John Kerr.
"	14	Cora, 22 years..	Schooner	46	6	..	I s l a n d produce, fruit, &c.	Stranded; total loss	..	West Reef, just outside Rarotonga Harbour	..	..	Vessel drifted on to reef through ropes of some of whaleboats, which were towing her, breaking	Henry Abbott.
"	14	Marlborough, 13 years	Ship ..	1124	22	..	General	Loss of life only	1	On voyage from London to Lyttelton, lat. 42° 28' S., long. 46° 38' E.	S.W.	Gale ..	An A.B., Oliver Jones, while engaged aloft at about 8.10 p.m., in shortening sail, fell into the sea and was lost	William Hird.
"	17	Gairloch, s.s. ..	Schooner	211	19	..	General	Stranded; partial loss	..	North Spit, Waitara River	S.	L i g h t ..	Strong fresh running out caused vessel to go on to North Spit	F i n d l a y McArthur.

RETURN of WRECKS and CASUALTIES to SHIPPING reported to the Marine Department—*continued*.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register Tonnage	Number of		Nature of		Number of Lives lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew	Passengers.	Cargo.	Casualty.			Direction.	Force.		
1889. Sept. 18	Huia, s.s., 11 years	Schooner	90	12	2	General	Stranded; partial loss	..	Month of River Manawatu, north bank	N.	Light ..	Casualty caused through there being a fresh in the river which was unknown to the master or the pilot who signalled the vessel to come in	A. T. Fraser.
"	Koranni, s.s., 6 years	Schooner	301	26	12	General	Stranded; no damage	..	About 5 miles eastward of Farewell Spit Light-house, Cook Strait	Calm	..	Casualty caused by vessel being kept too close to the spit	Henry Edward Hill.
"	Koranni, s.s., 6 years	Schooner	301	26	21	General	Stranded; total loss	..	Piege Rocks, French Pass	..	..	Master erred in judgment in not retracing his course when the white light was sighted. His certificate was suspended, and he was ordered to pay the costs of the inquiry.	Ditto.
"	Rotorua, s.s., 13 years	Schooner	576	..	..	General	Loss of life only	1	On voyage from New Plymouth to Manukau	..	..	A passenger, Major Jackson, M.H.R., reported missing on arrival of vessel at Onehunga, on the 29th September. Seen in his berth by bedroom-steward at 10 p.m. the previous evening, but not seen afterwards. Ship searched for him before arrival, without result. Weather fine, and smooth sea throughout the passage	Robert Hedderston Neville.
"	Jubilee, s.s. ..	Schooner	1005	41	..	General	Collision; no damage	..	Near end of Queen's Wharf, Wellington Harbour	..	..	Vessel was approaching the wharf, and ran into the hulk "European," through not seeing her light soon enough	Richard Brothers.
Oct. 5	William McLaren, 15 years, Newcastle, 1889, Red 3 years	Barque..	536	13	..	Coal ..	Stranded; total loss	..	Steeple Rock, near Worsley Bay, Wellington Harbour	N.	Moderate gale	Master erred in keeping too close to the Steeple Rock; and when he found that the vessel was making water so fast after he had anchored, and after the accident to the pump, he ought to have bunched the vessel without waiting for the steamer. Master was ordered to pay the costs of the inquiry	Joseph Salmon.
"	Stanley, 7 years, Auckland, Bureau Veritas 11 years	Brigantine	344	10	..	Timber..	Stranded; slight damage	..	Mary Catherine Bank, Kaipara	W.N.W.	Whole gale	Vessel anchored, but owing to gale anchors did not hold until she was too near the bank to allow her to swing clear of the bank at change of tide	John McKenzie.
"	Elizabeth ..	Cutter ..	12	3	..	Flax and wool	Stranded; total loss	..	Between Frenchman's Cap and Whangarei Heads	S.E.	Gale ..	Vessel on way from Sandy Bay to Auckland when bad weather came on. In trying to get to Whangarei for shelter, she missed stays and went ashore	David Owens.
"	Margaret Galbraith, 21 years, A.A.I. Lloyd's	Ship ..	841	20	..	Ballast..	Collision; partial loss	..	Two miles off Godley Head, Lyttelton Harbour	S.	Fresh breeze	The tug "Lyttelton," when going to the "Margaret Galbraith" with the pilot, took a shear, and came stem on to the latter vessel	Moses Carden.
"	Lyttelton, p.s., 11 years	..	39	6	..	..	Collision; partial loss	..					John Galbraith.

Nov.	3	Invercargill, 15 years, A1 Lloyds	Ship	1246	31	2	General	Loss of life only	1	Lat. 43° 32' S., long. 124° 55' E., on voyage from London to Auckland	S.	Gale ..	John Muir.
"	19	Nairnshire, s.s., 1 year, 100 A1	Brig	2428	62	..	Water-ballast	Loss of anchor and chain	..	Foveaux Strait, usual anchorage between Bluff Harbour and Dog Island	W.S.W.	Gale ..	The second mate, Thomas William Brown, who had charge of the decks, went forward to take in port side-light, two of the hands having refused to do so when ordered, on the ground that weather was too bad. In attempting to do this, he was washed overboard and drowned
"	19	Beltana, 20 years, A1 Lloyds	Barque..	741	31	..	Wool ..	Fire on board; partial loss	..	Near Antipodes Island, South Pacific	..	..	Peter Wallace.
"	21	Peru, 13 years, A1 Lloyds	Barque..	683	15	..	Ballast ..	Stranded; partial loss	..	Silloth Rocks, Barrier Reef, on voyage from Queensland to Gisborne	S.E. by S.	Moderate breeze	William Beaton Orr.
Dec.	7	Rotorua, s.s., 13 years	Schooner	576	41	75	General	Collision; partial loss	..	About 6 miles off Kaikoura Peninsula	..	Calm, foggy	Robert Heddles-ton Neville.
"	7	Orawaiti, s.s., 6 years	Schooner	298	18	..	General	Collision; partial loss	..	Queen's Wharf, Wellington	..	Calm ..	Geo. McDonald.
1890.	5	Arawa, s.s., 5 years	Barque, f o r m a s t e d	3268	..	..	General	Fire on board; slight damage	..	Lat. 46° S., long. 19° E.	..	Calm ..	John Stuart.
"	13	Peri, 23 years	Ship	896	..	..	General	Loss of life only	1	Off Stripe Point, West Coast, South Island	..	Moderate	John Walter Steel.
"	16	Dingadee, s.s., 2 years	Schooner	393	20	..	..	Stranded; partial loss	..	Shoal south of Ward Island, Wellington Harbour	S.W.	Strong breeze	Duncan Downie.
"	18	J. W. Parker, 16 years, United States of America	Brig'ntine	361	..	..	Ballast ..	Stranded; no damage	..	Abreast Port Albert Wharf, Kaipara Harbour	N.W.	Fresh breeze	John Warren Kane
Feb.	7	Splendid, 55 yrs.	Barque..	358	10	..	..	Stranded; total loss	..	On voyage from Lyttelton to Wellington	..	Gentle breeze	Harold Dillner.
"	18	Rotorua, s.s., 13 years	Schooner	576	41	..	General	Loss of life only; suspected suicide	1		N.W.	Light ..	Robert Heddles-ton Neville.

The second mate, Thomas William Brown, who had charge of the decks, went forward to take in port side-light, two of the hands having refused to do so when ordered, on the ground that weather was too bad. In attempting to do this, he was washed overboard and drowned

Windlass carried away when getting under weigh, cable then ran out to end, and had to be cut to enable steamer to get to sea

Spontaneous combustion of greasy wool ..

Master should not have left deck when vessel was so close to land. Chief mate was guilty of grave negligence in not acting when sail-maker reported land right ahead. Master was ordered to pay costs of inquiry

Master of "Rotorua" was guilty of grave negligence in driving vessel at speed of 11 knots an hour in a dense fog. He was censured, and ordered to pay costs of inquiry

Fire discovered in engineer's store-room about 1.15 a.m., and was extinguished by crew in about a quarter of an hour. Damage done was destruction of bulkhead dividing store-room workshop and its contents, consisting of oil, lampwicks, packing, &c. Origin of fire unknown

An A.B. named J. E. Petersen, while engaged in setting up foretop-gallant stay, the jib-boom having carried away in a gale on the 5th January, fell overboard and was drowned

Master showed want of judgment in not allowing sufficiently for the effect of the heavy sea and wind on a light ship, which brought him inside the course he was steering. He was ordered to pay costs of inquiry

Vessel missed stays while being put on port tack in beating into harbour, and touched the tail of shoal

Vessel grounded on river-bank, which caused her to strain and leak badly, and when she was afterwards beached to get at leak she collapsed

A passenger who gave the name of Wright was found missing when tickets were being collected on nearing Wellington. He is supposed to have jumped overboard during the night

RETURN OF WRECKS and CASUALTIES to SHIPPING reported to the Marine Department—*continued*.

Date of Casualty.	Name of Vessel, also Age and Class.	Rig.	Register Tonnage.	Number of		Nature of		Number of Lives lost.	Place where Casualty occurred.	Wind.		Decision of Court of Inquiry, &c.	Name of Master.
				Crew.	Passen- gers.	Cargo.	Casualty.			Dirac- tion.	Force.		
1890. Mar. 8	Tongariro, s.s.	Barque..	2657	..	..	General	Loss of life only	1	On voyage from London to Wellington, Ushant light bearing S. by E. distant 23 miles Off coast north-west of South Island	..	Fresh ..	A saloon - passenger, General Sir Howard Elphinstone, fell overboard at 9.25 p.m. and was drowned	John Bone.
"	Wareatea, s.s., 7 years	Schooner	288	26	6	Coal ..	Explosion of coal-gas; no damage	..		..	Calm ..	Explosion of coal-gas on board	George Lambert.
"	Waitoa, s.s., 7½ years	Cutter ..	27	4	..	..	Collision; partial loss	}	Auckland Harbour	..	..	Master of "Waitoa" should have seen "Birkenhead" before he admits he did; and if after the time when he says he saw her he had kept up his speed instead of cutting off steam he would have gone clear, and acting as he did he was guilty of an error of judgment. Master of "Birkenhead" was justified in assuming that "Waitoa" would go astern of him, but when he saw her shut off steam he should have reversed his engines instead of going slow. Master of "Waitoa" ordered to pay costs of inquiry	John Carrick Hewson. Benjamin Poole.
"	Birkenhead, 5½ years	..	55	3	..	..	Collision; slight damage						
"	Emilie, 15 years (Nicaraguan vessel)	Barque..	729	12	..	Sawn timber	Water - logged, dismasted, and stranded; total loss	8	About 20 miles west of Puysegur Point	N.W.	Fresh gale	Vessel left Bluff for Port Pirie, South Australia, with cargo of timber, and when about 20 miles westward of Puysegur Point she was caught in a sudden gale and became water-logged. Vessel appears to have been moderately old, but otherwise seaworthy, and was probably burst open owing to lower part of timber being improperly stowed. After becoming water-logged she fell over on broad-side, when masts fell overboard, and master, second mate, and six men were drowned. Hull righted, and afterwards drifted on to Stewart Island	George L. Small.

SUMMARY of CASUALTIES to SHIPPING and SEAMEN reported to the Marine Department during the Financial Year ended the 31st March, 1890.

Nature of Casualties.	Casualties on or near the Coasts of the Colony.										Casualties outside the Colony.										Total Number of Casualties reported.											
	Steamers.					Sailing-vessels.					Total within Colony.					Steamers.							Sailing-vessels.					Total outside Colony.				
	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.			No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.	No. of Vessels.	Tonnage.	No. of Lives lost.			
Strandings,—																																
Total wrecks	2	464	2	10	2,000	10	12	2,464	12																							
Partial loss	4	804	..	2	362	..	6	1,166	..																							
Slight damage	1	260	..	1	344	..	2	604	..																							
No damage	1	301	..	2	476	..	3	777	..																							
Total strandings	8	1,829	2	15	3,182	10	23	5,011	12																							
Collisions,—																																
Partial loss	6	1,190	..	2	1,471	..	8	2,661	..																							
Slight damage	1	55	..	..	..	..	1	51	..																			
No damage	1	1,005	..	..	..	..	1	1,005	..																			
Total collisions	8	2,250	..	2	1,471	..	10	3,721	..																							
Miscellaneous, including explosion of coal-gas, damage by heavy seas or fire to hull and cargo, also loss of anchor, chains, &c., and break-down of machinery	3	5,984	..	..	..	..	3	5,984	..																			
Total casualties to shipping	19	10,063	2	17	4,653	10	36	14,716	12																							
Loss of life only	2	1,152	2*	1	84	1	3	1,236	3																							
Total number of casualties reported	21	11,215	4	18	4,737	11	39	15,952	15																							

* Suspected suicides.

ANNUAL REPORTS ON WORK DONE.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1890.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			Totals.	
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Boilers.	Fees.
Auckland	27	67	22	120	49	156	441	£ 751 5 0
Taranaki	2	20	4	9	14	11	60	93 0 0
Hawke's Bay	7	21	10	15	17	27	97	194 0 0
Wellington	14	92	26	74	85	100	391	776 15 0
Marlborough	5	18	5	9	3	10	50	96 0 0
Nelson North	2	30	7	25	18	8	90	168 0 0
Nelson South	...	8	4	24	15	3/	88	176 0 0
Westland	1	15	8	19	6	12	61	115 0 0
Canterbury	31	134	3	110	28	65	371	580 0 0
Otago	50	187	11	161	49	151	609	928 10 0
Totals	139	592	100	566	284	577	2,258	3,878 10 0

The INSPECTOR of MACHINERY, AUCKLAND, to the ASSISTANT SECRETARY, Marine Department.
SIR,— Auckland, 9th April, 1890.

I have the honour to submit to you the annual report on the inspection of land boilers and machinery in the Auckland District for the year ended the 31st March, 1890.

During the above period 480 inspections have been made, 149 of which were done by Mr. W. Peck. During the year 26 new boilers have been brought into use, 13 of which were imported and 13 made in this colony; 4 were brought from Canterbury and 1 from Wellington Districts, 54 have changed owners, 11 extended certificates, and repairs have been effected to 41. Nos. 1653 and 1151, with collapsed flues, which are given in returns, were in charge of experienced men at the time of collapse, and may therefore be attributed to gross carelessness on their part. It is fortunate that there are no accidents to life or limb to report in connection with boilers.

Attendance to the construction of and repairs to boilers is an important part of an Inspector's duty, owing to the keen competition which now exists in the iron-trade for work, and the higher pressures which many of the land boilers are now worked compared with a few years ago.

I regret having accidents with machinery to report, particulars of which are given in the return.

The appended returns give the number and description of the boilers and machinery inspected, fees payable, defects found in boilers and machinery, notices to repair boilers and protect dangerous parts of machinery, and accidents to life and limb in this district.

The Assistant Secretary, Marine Department. I have, &c.,
W. J. JOBSON.

RETURN showing the NUMBER and DESCRIPTION of BOILERS, &c., INSPECTED, and FEES payable, in the AUCKLAND DISTRICT during the Year ended the 31st March, 1890.

Nature of Boiler.	Number.			Fees.	Remarks.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.		
Portable boilers ... ..	...	1	1)	£ s. d.	(Employed at 30 establish- ments; fees at £5 each.
Stationary boilers	6	4	79)	150 0 0	
Portable boilers	26	63	16)		
Stationary boilers	114	45	77	601 5 0	
Locomotive boilers	1	3	5)		
Total	147	116	178		
Machinery inspections (17, £1 each) ... ..		...	...	17 0 0	
" " (6, 15s. each) ... ..		...	...	4 10 0	
" " (11, nil) ... ..		...	...	...
Total for year... ..	...	...	...	772 15 0	

Five boilers in public buildings owned by Government are not included in the above return, and 171 are charged for at the reduced rate brought into force on the 1st January last.

RETURN of DEFECTS found in BOILERS and FITTINGS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1890.

Description.	Dangerous.	Ordinary.	Total.
Collapsed furnace-flues	1	...	1
Collapsed vertical flues	1	...	1
Tops of fire-boxes out of shape	1	2	3
Corrosion, internal	2	5	7
Corrosion, external ... ..	...	10	10
Fractured plates ... ..	...	3	3
Blistered plates... ..	...	1	1
Pitted and grooved plates ... ..	...	2	2
Tubes defective ... ..	...	7	7
Joints sprung ... ..	...	5	5
Total defects found in boilers	5	35	40
Defective fittings—			
Safety-valves... ..	...	3	3
Feed-valves and pipes ... ..	...	2	2
Pressure-gauges ... ..	...	6	6
Water-gauges and test-cocks ... ..	...	9	9
Spring-balances ... ..	...	3	3
Blow-off cocks and pipes ... ..	...	1	1
Omissions—			
Boiler without man-hole ... ..	...	1	1
Gross total	5	60	65

Four of the boilers found in a dangerous state have been thoroughly repaired, and are now in good working-order; one condemned.

RETURN of NOTICES given to REPAIR BOILERS in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1889.		
April 26 ...	Portable	Nine of the tubes to be renewed.
April 27 ...	Portable	Fire-box and tubes renewed, and a new safety-valve fitted.
May 6 ...	Portable	Five new tubes and a patch to be fitted at blow-off.
May 10 ...	Vertical tubular	Repairs to be effected to vertical flue.
June 19 ...	Vertical flue	New vertical flue fitted, shell and furnace repaired.
July 8 ...	Portable	Mountings and connections to be overhauled.
Aug. 9 ...	Vertical tubular	New safety-valve fitted, and man-hole cut in shell.
Aug. 16 ...	Cylindrical	New plate fitted to the bottom.
Aug. 22 ...	Cornish	Patch to be fitted to the shell.
Sept. 6 ...	Portable	Two patches to be fitted at sludge-holes.
Sept. 17 ...	Longitudinal tubular	Three-fourths of the tubes renewed.
Sept. 17 ...	Longitudinal tubular	After tube-plate repaired.
Oct. 25 ...	Longitudinal tubular	Patch on front end to be renewed.
Nov. 7 ...	Vertical flue	Part of the vertical flue renewed.
Nov. 7 ...	Vertical flue	New vertical flue to be fitted.
Nov. 13 ...	Semi-portable	Defective place in fire-box to be renewed.
Dec. 2 ...	Portable	Four additional stays to be fitted to top of fire-box.
Dec. 13 ...	Longitudinal tubular	Half-plate in after end to be renewed.
Dec. 16 ...	Portable	Six additional stays to be fitted to top of fire-box.
Dec. 19 ...	Portable	Patch on fire-box tube-plate to be renewed.
Dec. 28 ...	Vertical flue	Upper part of vertical flue renewed.
1890.		
Jan. 17 ...	Longitudinal tubular	To be retubed.
Jan. 17 ...	Vertical flue	Repairs to be effected to upper part of flue.
Jan. 21 ...	Vertical flue	Defective place in shell to be renewed.
Jan. 24 ...	Portable	Patch on top of fire-box taken off and renewed.
Jan. 25 ...	Cylindrical	Three seams in bottom to be pared and caulked.
Jan. 28 ...	Portable	Safety-valve and connections to be overhauled.
Jan. 28 ...	Vertical tubular	Patch to be fitted at sludge-hole, and steam-pipe overhauled.
Feb. 15 ...	Cornish	Patch to be fitted to crown of shell.
Feb. 20 ...	Cornish	Strengthening-ring to be fitted to furnace-flue.
Mar. 6 ...	Portable	New top to be fitted to fire-box, and one side of ditto repaired.
Mar. 14 ...	Cornish	Two half-plates in bottom to be renewed.
Mar. 31 ...	Portable	Four additional stays fitted to top of fire-box.

RETURN of MACHINERY INSPECTED in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1890.

Description of Machinery.	Steam.	Water.	Gas.	Description of Machinery.	Steam.	Water.	Gas.
Ammunition factory ...	1	...	...	Glycerine-works ...	1	...	...
Air-compressor ...	1	...	...	Hoisting ...	25	...	...
Boiling-down ...	4	...	...	Hauling ...	9	...	...
Bakeries ...	2	...	...	Ironworks and foundries	16	...	...
Boat-building ...	1	...	...	Laundries ...	2	...	...
Breweries ...	7	...	...	Lifts or elevators ...	2	7	1
Brick-works ...	1	...	...	Lead-works ...	1	...	...
Block- and pump-works ...	1	...	...	Mortar-mills ...	6	...	...
Bone-mills ...	3	...	...	Malt-mill ...	1	...	...
Boot factory ...	1	...	...	Maize-mill ...	1	...	...
Butter-box factory ...	1	...	...	Meat-canning factories ...	2	...	...
Coach factory ...	1	...	...	Oil-springs ...	1	...	...
Clothing factory...	1	...	1	Oil-, soap-, & candle-works	2	...	...
Confectionery factories ...	2	...	...	Pumping and winding ...	10	...	...
Cabinet-making factories ...	2	...	...	Printing ...	2	...	...
Cement-works ...	7	...	...	Potteries ...	2	...	...
Chemical-works ...	1	...	...	Pile-driving ...	2	...	...
Cordial-works ...	4	...	...	Phormium-dressing ...	51†	18	...
Chaff-cutting ...	21	...	...	Quartz-crushing ...	3	3	...
Coffee-mills ...	3	...	...	Road-roller ...	1	...	...
Dairy factories and cream- eries...	16	...	...	Rope-works ...	1	...	...
Dredging ...	1	...	...	Saw-mills ...	46	1	...
Docks ...	2	...	...	Sash and door factory ...	1	...	...
Diamond-drills ...	1	...	...	Sugar-works ...	1	...	...
Flour-mills ...	6	...	...	Stone-breaking ...	2	...	...
Flock-mill ...	1	...	...	Ship-building yards ...	2	...	...
Fellmongeries ...	3	...	...	Sausage-machines ...	2	...	...
Freezing-works ...	2	...	...	Tanneries ...	6	...	...
Fruit-preserving works ...	2	...	...	Tinplate-works ...	1	...	...
Fish-preserving works ...	6	...	...	Threshing-machines ...	11	...	...
Firewood-cutting ...	12*	2	...	Wool-dumping ...	2	...	...
Fire-engine ...	1	...	...	Waterworks ...	2	...	...
Gasworks ...	3	...	...	Woollen-mill ...	1	...	...
				Winding ...	10	...	...

* One, water and steam.

† Three, water and steam.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with LAND BOILERS and MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1890.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature and Date of Accident.	Fatal or not.	Cause of Accident, and Remarks.
Gibbs Brothers, Churchill	Flax-mill ..	F. Nickisson, aged 17 years	Right arm wrenched off, 11th July, 1889	Not	It appears he was in the act of throwing a hank of flax towards the scutcher, when, one end of the hank becoming entangled with a revolving spindle, his arm was drawn towards it and wrenched off. A more experienced person would have let go the flax in place of holding on.
William H. Wallis, Okete, Raglan	Flax-mill ..	Maka Hanuioani (Maori), aged 18 years	Right arm crush'd	Fatal	He was employed at the scutcher; his right arm got entangled with the flax, being drawn with it into the feeding-apparatus and severely crushed; it was afterwards amputated. He died the following day from the effects of the injuries received.
Wilson and Co., Mahurangi	Lime-works ..	R. W. Warin, aged about 27 years	Right arm severely crushed, 11th November, 1889	Not	He was reaching over to oil the top parts of a pulverising-machine while in motion; his shirt sleeve appears to have been loose, as it was caught by a pair of wheels; his arm was drawn in and severely crushed. The manager's instructions were to stop the machine for oiling, &c. This and the preceding case are due to the clothing worn being too loose. If many of those employed about machinery would be more particular in this respect there would be fewer accidents to report.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the AUCKLAND DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Notice.	Description of Machinery.	Parts of Machinery to be fenced, &c.
1889.		
April 12 ...	Chaff-cutter ...	Belt and pulley, the guard over knives to be repaired.
April 18 ...	Saw-mill ...	Two belts of planing-machines.
July 13 ...	Drag-bench ...	Driving-belt and pulley of turbine-wheel.
July 15 ...	Winding ...	Engine-crank and connecting-rod.
July 19 ...	Quartz-crushing ...	Driving-belt, three-spur and pinion-wheels, and two couplings on main shafting.
Aug. 17 ...	Saw-mill ...	Two belts of drag-bench, three belts of planing-machine, and one length of shafting.
Aug. 23 ...	Saw-mill ...	Two fly-wheels of breaking-down saw and emery-wheel.
Sept. 12 ...	Flax-mill ...	Engine fly-wheel and crank, two belts of stripper, and opening in scutcher reduced to 1½ in. in width.
Sept. 18 ...	Saw-mill ...	Pair of wheels of log-winch and belt of breaking-down saw.
Sept. 26 ...	Flax-mill ...	Belt of stripper, and opening in scutcher reduced.
Sept. 27 ...	Flax-mill ...	Belt and pair of pinion-wheels of stripper.
Sept. 28 ...	Dairy factory ...	Two engine fly-wheels, and intermediate gear of six cream-separators.
Oct. 2 ...	Flax-mill ...	Two belts of stripper, and opening in scutcher reduced.
Oct. 3 ...	Flax-mill ...	Main driving-belt, and pulley and belt of scutcher.
Oct. 4 ...	Flax-mill ...	Engine fly-wheel and belt, and belt of stripper.
Oct. 10 ...	Flax-mill ...	Two belts and pair of pinion-wheels of stripper.
Nov. 8 ...	Lime-works ...	Spindle and roller shaft of pulveriser.
Nov. 10 ...	Saw-mill ...	Engine fly-wheel and belt, fly-wheel of breaking-down saw.
Nov. 20 ...	Winding ...	Speed- and pinion-wheels of winding-gear.
Nov. 20 ...	Flax-mill ...	Belt and pair of wheels, and opening in scutcher reduced to 1½ in. in width.
Nov. 25 ...	Flax-mill ...	Engine fly-wheel and belt, and four belts of stripper.
Dec. 10 ...	Flax-mill ...	Two belts, pair of pinion-wheels, and spindle end of scutcher.
Dec. 11 ...	Saw-mill ...	Two belts of planing-machine and emery-wheel.
Dec. 13 ...	Flax-mill ...	Engine fly-wheel and belt, two belts, and spindle-end of stripper.
Dec. 14 ...	Flax-mill ...	Engine fly-wheel and belt, two belts, and spindle-end of stripper.
Dec. 16 ...	Flax-mill ...	Four belts and two pairs of wheels of strippers, opening in scutcher reduced.
Dec. 19 ...	Bone-mill ...	Pair of cog-wheels of bone-crusher.
1890.		
Jan. 6 ...	Flax-mill ...	Engine fly-wheel and two belts of stripper.
Jan. 14 ...	Flax-mill ...	Two belts of stripper.
Jan. 15 ...	Flax-mill ...	Water-wheel and race, stripper, and scutcher-belts, opening in scutcher reduced.
Jan. 18 ...	Flax-mill ...	Water-wheel and race, driving- and scutcher-belts.
Jan. 18 ...	Flax-mill ...	Water-wheel and belt, scutcher-belt, and opening reduced to 1½ in. in width.
Jan. 22 ...	Flax-mill ...	Feed-rollers and belt of stripper.
Jan. 23 ...	Quartz-reduction works ...	Four belts of Pelton-wheels, six pulleys and belts of wiper shafts, and coupling on main shaft.
Jan. 27 ...	Flax-mill ...	Engine fly-wheel and belt, opening in scutcher reduced.
Jan. 30 ...	Flax-mill ...	Main driving-belt, two belts of stripper, spindle-ends, and opening in scutcher reduced.
Feb. 6 ...	Flax-mill ...	Water-wheel, belt of scutcher, and opening in ditto reduced to 1½ in.
Feb. 11 ...	Saw-mill ...	Belt of drag-bench and fly-wheel of small engine.
Feb. 11 ...	Flax-mill ...	Main driving-belt and three belts of stripper.
Mar. 11 ...	Pumping and winding ...	Engine-spur and pinion-wheels.
Mar. 19 ...	Flour-mill ...	Safety-catch to be fitted to steam-lift.
Mar. 25 ...	Flax-mill ...	Engine fly-wheel and belt, two belts of stripper, spindle-ends of scutcher.

The INSPECTOR of MACHINERY, WELLINGTON DISTRICT, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Office of Inspector of Machinery, Wellington, 7th July, 1890.

I have the honour to forward for your information the annual report on the boilers and machinery in the Wellington, Marlborough, Nelson North, Taranaki, Hawke's Bay, Nelson South, and Westland Districts for the financial year ended the 31st March, 1890.

During the above period 834 boiler-inspections and 707 machinery-inspections have been made. Included in the above numbers are 452 boiler- and 400 machinery-inspections made by Mr. Mowatt, and 34 boiler- and 30 machinery-inspections by Mr. Peck. Ninety-five fresh boilers have been added during the year—30 of which have been made in the colony, 19 new ones have been imported, and 46 are from other districts. At the end of the year 268 were still to inspect.

The increase in the number of boilers during the year is almost entirely due to the flax-milling industry. Repairs of a more or less extensive character have been effected in 36 boilers, and in 27 cases new mountings have been fitted. There have also been 28 notices given to fence dangerous parts of machinery.

I regret having to report several accidents, some of a serious nature, to persons employed about machinery. Fencing will not prevent accidents of the description reported, as, with one exception, the sufferers themselves have been to blame—the exception being in the case of a man who had his head cut by a piece of machinery while attending to a stripper, the drum of which flew in pieces while he was in the act of feeding the green flax; one of the flying fragments striking him on the head, and inflicting a serious wound. I made an examination of a part of the drum when inspecting the mill some time after the accident, but was unable, from the appearance of the fracture, to account for it giving way. Care and daily examination will be required to guard against accidents of this nature. No accidents to life or limb have occurred in connection with boilers, although two accidents have taken place from overheating of the plates, which, only for the high class of material of which they are constructed, might have ended in serious results.

Appended are returns showing the number and class of boilers inspected, the horse-power, fees payable, number and description of machines inspected, number of notices given to fence dangerous parts of machinery, number of notices given to repair defects in boilers, return of accidents to boilers, and return of accidents to persons employed about machinery.

I have, &c.,
H. A. MCGREGOR,
Inspector of Machinery.

The Assistant Secretary, Marine Department, Wellington.

RETURN of MACHINERY INSPECTED during the Financial Year ended the 31st March, 1890.

Description of Machinery.	Wellington.				Marlborough.			Nelson North.		Taranaki.			Hawke's Bay.		Nelson South.		Westland.		Total
	Steam.	Steam and Water.	Water.	Gas.	Steam.	Steam and Water.	Water.	Steam.	Water.	Steam.	Water.	Wind.	Steam.	Water.	Steam.	Water.	Steam.	Water.	
Bark-mills .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Bone-mills .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	2
Boiling-down establishments	14	..	..	..	2	..	..	..	..	5	..	..	2	..	..	..	..	..	28
Brick-making machines	8	..	..	..	..	..	..	1	..	..	..	..	2	..	..	..	1	..	12
Breweries	10	..	..	..	1	..	..	3	..	3	..	..	3	..	3	..	7	..	30
Chaff-cutting machines	17	..	..	..	3	..	..	13	..	..	..	..	5	..	..	..	..	..	38
Confectionery	5	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..	..	7
Coffee- and spice-mills ..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	3
Coach factories	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Cooperages	4	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	7
Cordial factories	6	..	..	..	3	..	..	1	..	1	..	..	..	..	..	..	1	..	12
Dairies	4	..	..	..	..	..	..	..	..	2	..	..	1	..	..	..	..	..	7
Drain-pipe works .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dredging-machines	2	..	..	..	..	..	..	..	..	1	..	..	1	..	3	..	..	..	7
Electric-light machines	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4
Fire-engines	1	..	..	..	2	..	..	..	..	..	..	..	1	..	..	..	1	..	5
Fire-wood cutting	14	..	..	..	1	..	..	4	..	1	..	..	3	..	..	..	..	..	23
Flour-mills	9	2	..	..	..	..	..	6	..	1	1	..	4	..	..	..	..	..	23
Foundries	8	..	..	..	2	..	..	2	..	1	..	..	2	..	1	..	1	..	17
Gasworks	1	..	..	..	1	..	..	..	..	..	..	..	1	..	..	..	..	..	3
Hauling-machinery	1	..	..	..	..	..	..	..	..	..	..	..	..	7	..	..	..	..	8
Hoisting-machinery	16	..	..	..	1	..	..	..	..	3	..	..	7	..	24	..	9	..	60
Hydraulics	1	..	..	..	2	..	..	..	..	..	..	..	3	..	..	..	..	..	6
Jam factories	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Lifts (hydraulic) .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Locomotives	12	..	..	..	1	..	..	1	..	2	..	..	2	..	10	..	3	..	31
Machine shops	5	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..	2	..	10
Meat-preserving works ..	5	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	6
Mortar-mills .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Oil-works	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Phormium-dressing	67	..	4	..	16	..	..	7	1	12	9	..	3	..	..	..	4	..	123
Printing	3	..	..	..	..	..	..	2	..	1	..	..	1	..	..	..	1	..	8
Pumping-machinery	5	..	..	..	2	..	..	..	..	..	..	..	1	..	8	..	2	..	18
Quartz-crushing .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	9	..	..	1	..	11
Refrigerating-machines ..	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	4
Road-roller	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Sausage machines	3	..	..	..	2	..	..	2	..	..	..	..	1	..	..	..	..	..	8
Sash and door factories ..	19	..	..	..	1	..	..	6	..	2	..	..	4	..	..	..	..	..	32
Saw-mills	42	..	..	..	8	..	..	21	..	5	..	..	21	..	13	..	19	..	129
Soap-works	2	..	..	..	..	..	..	2	..	..	..	..	1	..	..	..	..	..	5
Steaming	8	..	..	..	..	..	..	..	..	..	..	..	3	..	..	..	..	..	11
Stone-crushing	3	..	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	6
Tanneries	2	..	..	..	..	..	..	2	..	1	..	..	..	..	..	..	..	..	5
Threshing-machines	13	..	..	..	..	..	..	5	..	6	..	..	3	..	..	..	..	..	27
Traction-engines .. ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Turneries	2	..	..	..	..	..	..	2	..	..	..	..	..	..	1	..	1	..	6
Vinegar works .. ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1
Winding-machinery	2	..	..	..	..	..	..	1	..	..	..	..	..	..	9	..	5	..	17
Woollen manufactory	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Wool-scouring machines ..	3	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	4
Totals*	330	2	4	..	52	..	..	87	1	53	10	..	79	..	88	..	60	1	767

* Included in the above totals are seven water-power machines, for which fees have been charged at the rate of 15s. each, and three at £1 each; total, £8 5s.

RETURN showing the NUMBER of LAND BOILERS INSPECTED during the Financial Year ended the 31st March, 1890.

Name of District.	Portable.			Stationary.			Totals.	
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Boilers.	Fees.
Wellington*	14	92	26	74	85	100	391	£ 776
Marlborough†	5	18	5	9	3	10	50	96
Nelson North	2	30	7	25	18	8	90	168
Taranaki ...	2	20	4	9	14	11	60	93
Hawke's Bay‡	7	21	10	15	17	27	97	194
Nelson South§	...	8	4	24	15	37	88	176
Westland||	1	15	8	19	6	12	61	115
Totals	31	204	64	175	158	205	837	1,618

The following boilers are included in maximum fees :--

* Thirty over 10 h.p.	..	..	..	..	..	..	30
† Five over 10 h.p.	..	..	..	..	..	..	5
‡ Fifteen over 10 h.p.	..	..	..	..	..	..	15
§ Nineteen over 10 h.p.	..	..	..	..	..	..	19
Four over 10 h.p.	..	..	..	..	..	..	4
							73

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended 31st March, 1890.

Date of Notice.	Description of Machinery.	Parts of Machinery to be fenced, &c.
1889.		
June 29	Saw-mill ...	Main driving-belt from engine to circular saws.
July 2	Flax-mill ...	All driving-belts, with fly-wheel of engine.
July 5	Saw-mill ...	Fly-wheel of engine, and part of main driving-belt.
August 9	Flax-mill ...	Stripper- and scutcher-belts, the latter close-boarded.
August 10	Flax-mill ...	Counter-shaft and pulleys and main driving-belt.
August 20	Saw-mill ...	Fly-wheel of engine.
August 21	Saw-mill ...	The counter-shaft and pulleys of planing-machine.
August 27	Saw-mill ...	The main driving-belt.
September 6	Saw-mill ...	The main driving-belt, and belt of circular saw.
September 17	Saw-mill ...	The fly-wheel of engine and main driving-belt.
September 17	Flax-mill ...	Stripper- and scutcher-belts.
September 18	Flax-mill ...	The driving-belt of scutchers close-boarded.
September 19	Saw-mill ...	Fly-wheel of engine, main driving-belt, and belts of circular saws.
September 23	Flax-mill ...	Driving-belts of strippers and counter-shaft.
1890.		
January 14	Flax-mill ...	Main driving-belt, and belt of stripper and scutcher.
January 20	Sash and door factory	Connecting-rods of vertical saw-frame.
January 24	Flax-mill ...	All driving-belts between engine and stripper.
January 25	Flax-mill ...	Main-driving belt, counter-shaft, and pulleys.
January 27	Flax-mill ...	The driving-belt of scutcher close-boarded.
January 29	Flax-mill ...	The gearing of turbine-wheel close-boarded.
January 29	Flax-mill .	The gearing of turbine-wheel close-boarded.
January 30	Flax-mill ...	The water-wheel, and driving-belts of stripper and scutcher.
January 30	Flax-mill ...	The driving-belt of scutcher close-boarded, and wide planks fitted under stripper-belts.
February 4	Flour-mill	The driving-belts close-boarded where passing through the floors.
February 10	Brewery ...	The fly-wheel of engine and driving-belt of firewood-saw.
February 13	Flax-mill ...	The water-wheel and driving-belts of stripper.
February 13	Flax-mill ...	The driving-belts of strippers, counter-shaft, and pulleys.
March 30	Flax-mill ...	Fly-wheel of engine and main driving-belt.

RETURN of NOTICES given to REPAIR BOILERS during the Financial Year ended the 31st March, 1890.

District, and Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
WELLINGTON. 1889.		
April 1 ...	Cornish...	New gauge-mountings.
April 5 ...	Cornish...	New fusible plugs.
April 6 ...	Semi-tubular ...	New compensating-ring round man-hole.
April 6 ...	Portable ...	New crown in fire-box.
April 24 ...	Multi-tubular ...	Extra stays (longitudinal).
May 14 ...	Portable ...	Doubling piece under the cylinders, and repairs to mud doors.
July 19 ...	Portable ...	Repairs to fire-box of locomotive.
July 23 ...	Multi-tubular ...	Retubed.
July 25 ...	Vertical tubular ...	New safety-valve fitted, and man-hole cut for examination.
July 27 ...	Portable ...	Repairs to fire-box of locomotive.
Aug. 14 ...	Cornish...	Repairs to shell near feed-valve chest.
Aug. 17 ...	Semi-tubular ...	Compensating-ring round man-hole, and additional stays.
Aug. 17 ...	Cornish...	New angle-iron fitted in back end, and lower part of front plate renewed.
NELSON SOUTH.		
Aug. 19 ...	Portable ...	Repairs to mud-hole doors.
Sept. 9 ...	Multi-tubular ...	Extra stays in steam- and water-space.
Oct. 11 ...	Cornish...	Repairs to longitudinal seams.
Oct. 12 ...	Multi-tubular ...	Repairs to mud-hole doors.
Nov. 7 ...	Portable ...	New crown in fire-box, repairs to skirt, new stays in steam-space, and all new stays in fire-box.
Nov. 8 ...	Portable ...	New stays in fire-box, and repairs to skirt.
Nov. 14 ...	Portable ...	Repairs to fire-box, and patch on shell.
Nov. 21 ...	Portable ...	New stays in fire-box, and skirt repaired.
Nov. 21 ...	Semi-tubular ...	Repairs to bottom of shell, and new blow-off cock fitted.
Nov. 30 ...	Vertical ...	New lum-leg fitted.
Nov. 30 ...	Cornish...	Repairs to front plate and mud door.
Dec. 5 ...	Multi-tubular ...	Retubed.
1890.		
Jan. 8 ...	Cornish...	Strengthening-rings round partially-collapsed furnace.
TARANAKI.		
Jan. 25 ...	Portable ...	New stays on crown of fire-box.
Jan. 25 ...	Portable ...	Extra cross-stays on crown of fire-box.
Jan. 31 ...	Portable ...	Repairs to mud-hole doors, and new steam-gauge.
Feb. 2 ...	Semi-tubular ...	Compensating-ring on man-hole, and new feed-check valve.
Feb. 12 ...	Portable ...	New longitudinal stay in steam-space.
WELLINGTON.		
Feb. 24 ...	Multi-tubular ...	New plate bottom of boiler, back ring of plate.
Feb. 26 ...	Cornish...	Patch on bottom, and blow-off cock refitted.
Feb. 26 ...	Portable ...	The skirt of fire-box chipped and caulked.
Feb. 26 ...	Lancashire ...	Strengthening-rings fitted on partially-collapsed furnace-tubes.
March 27 ...	Portable ...	Patch on side of fire-box.

RETURN of Boilers in the WELLINGTON DISTRICT inspected during the Financial Year ended the 31st March, 1890, the Certificates for which have been issued Free.

	Date.	Fees.
	1889.	£ s. d.
Telegraph Department: One boiler over 10 h.p. ...	June 1 ...	3 0 0
Prisons Department: One boiler over 10 h.p. and one over 5 h.p. ...	Nov. 4 ...	5 0 0
Lunatic Asylum: Two boilers over 5 h.p. ...	Nov. 12 ...	4 0 0
Defence Department: One boiler over 10 h.p. and one over 5 h.p. ...	June 19 ...	5 0 0
Government Printer: Two boilers over 10 h.p. ...	April 18 ...	5 0 0
		£22 0 0

RETURN of ACCIDENTS to BOILERS in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Accident.	Name and Address of Owners.	Nature and Cause of Accident.
1889. May 19 ...	The Grey Valley Coal Company, Nelson South	Partial collapse of furnace-flue from want of water. One of the ring-seams of the flue was opened, allowing the steam to escape through the furnace. The pressure at the time was low, about 7lb. to the square inch, or the result might have been very serious.
1890. March 26 ...	The Wellington Meat Export Company, Wellington	Partial collapse of the flue of a Lancashire boiler. This was no doubt owing to shortness of water on the parts affected; but whether the water was allowed to fall below the crowns of the flues, or was driven off by violent ebullition, examination failed to show. The furnaces are of the best quality of mild steel, and showed no sign of crack or flaw even when forced back to their former position.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with MACHINERY in the WELLINGTON DISTRICT during the Financial Year ended the 31st March, 1890.

Name and Address of Owners.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident, and Remarks.
The Wellington Woollen Manufacturing Company (Limited), Wellington.	Woollen-mill ..	William Norris	Leg crushed ..	Not ..	This accident was caused by the rollers of a scouring-machine, and was the result of the lad's attempting to climb up on the machine while it was in motion, when his leg was caught and severely crushed between the rollers. In the performance of his duties he had no right or necessity to be there, and the accident can only be put down to venturousness on the part of the lad himself.
The Wellington Woollen Manufacturing Company (Limited), Wellington.	Woollen-mill ..	Mary Smith ..	Finger crushed ..	Not ..	This accident was caused by the wheels of the machine she was attending, she having lifted the protecting-cover off for the purpose of cleaning them, her finger by some means getting between the cogs. The notice to all machine-tenders in the mill is on no account to remove any of the protecting-covers; and had she acted up to these instructions the accident could not have occurred.
Mudford Brothers, Campbelltown	Flax-mill ..	William Quinn	Head cut ..	Not ..	This accident was caused by the drum of a stripping-machine flying in pieces while the man was in the act of feeding in the flax; but whether it was due to a flaw in the casting, or owing to some hard substance getting between the drum and the beater, I cannot ascertain. Care and daily examination of the drum are all that can be done to prevent accidents of this nature.
Stewart, Sutton, and Co., Palmerston North	Flax-mill ..	John O'Halloran	Arm torn off ..	Not ..	This accident was caused by the driving-belt of the stripping-machine catching and winding the man's arm round the counter-shaft. At the time of the accident he was assisting to repair the belt without stopping the machinery, a very dangerous proceeding, which fencing cannot prevent.
E. Gawn, Wellington	Steam-mangle	Florence Moore	Hand crushed ..	Not ..	This accident was caused by the rollers of the mangle catching the girl's hand while attempting to reach to the opposite side of the machine from which she stood. Her duties did not require her to do this, and to fence in the rollers would render the machine useless. The accident was of such a serious nature that the hand had to be amputated about the wrist.

The INSPECTOR of MACHINERY, CANTERBURY DISTRICT, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Christchurch, 5th April, 1890.

I have the honour to forward annual reports of boilers and machinery inspected by me during the financial year ending the 31st March, 1890.

The total number of inspections during the year is rather less than last year, although I have had more cases of bad boilers and dangerous machinery to deal with.

The revival of the flax-industry has caused an increase in the number of mills, and as they are often started by men of small capital the machinery is often of a makeshift character, and therefore requires more frequent inspection; and as the owners often fail to give notice of having started a mill, as required by the Inspection of Machinery Act, they may have been at work some time before the Inspector is aware of it.

The only fatal accident I have to report this year occurred at a flax-mill scutching-machine, but this machine has been very much improved since. By degrees I have got the mouthpiece so reduced in size of opening that it is hardly possible for a man to get his hand in, and there is no difficulty in feeding the fibre, as by the present arrangement of mouthpiece there is an incurent of air which draws it in.

There is again an increase of traction-engines in my district, and I find they are sometimes used for ploughing, and are likely to be largely used for that purpose, and, as I stated in my last annual report, they are often in the hands of very incompetent men. The only way to prevent this would be to require the engine-drivers to hold a certificate of competency. This is in force in Victoria, although there is no general inspection of boilers in force there as yet.

The makers of traction-engines seldom make any provision for inspection, so in a few cases I have had a small door cut and properly fitted for that purpose.

The reduction of fees, provided same is paid within one month, has had a good effect, although there are still some owners who will not pay the fee until they are forced to do so; much trouble is thus caused, and much time wasted in writing these owners.

Should further information on any part of the report be required I shall be happy to supply the same.

I have, &c.,

The Secretary, Marine Department, Wellington.

GEORGE CROLL.

RETURN of BOILERS belonging to the GOVERNMENT INSPECTED by me during the Financial Year ended the 31st March, 1890.

For what and when used.	Amount of Fee if charged.
	£ s. d.
Used for cooking and pumping at the Sunnyside Lunatic Asylum, Christchurch...	2 0 0

RETURN of DEFECTS on the INSPECTION of BOILERS and FITTINGS in the CANTERBURY DISTRICT during the Financial Year ending the 31st March, 1890.

Description of Defects.	Dangerous.	Ordinary.	Total.
Crack in shell (caused by a fall in erection)	1	...	1
Crack in fire-box or furnace	2	...	2
Crown of fire-box down	1	...	1
Crack in neck of uptakes (vertical boilers)	1	1	2
Furnace injured from over-heating (Cornish)	2	1	3
Faulty design	1	...	1
Fitting defective	2	...	2
Laminated plate ... ..	...	1	1
Leakage in fire-box ... ..	...	1	1
Leakage on bottom (Cornish) ... ..	...	1	1
Longitudinal stay broken	1	...	1
Pressure-gauge incorrect	2	1	3
Patches on fire-box ... ..	...	7	7
Shell grooved, pitted, and wasted (train-engine)	1	...	1
Tubes wasted	3	7	10
Top tube-plate cracked (vertical boiler)	1	...	1
Vats wasted at top and stays	3	1	4
Wasted in shell from age and exposure	2	...	2
Wasted from damp foundations ... ..	...	4	4
Wasted from leakage at doors and joints	4	9	13
Total	27	34	61

Of the above boilers 27 have been repaired, 7 have been condemned, and the remainder are out of use or are working at a reduced pressure.

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1890.

Name of District.	Portable.			Stationary.			Total.
	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	Under 5 h.p.	5 to 10 h.p.	Over 10 h.p.	
Canterbury	31	134	3	110	28	65	371

RETURN showing FEES payable for the INSPECTION of BOILERS and MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1890.

Name of District.	Fees payable in respect of Boilers.			Fees payable in respect of Machinery.			Total.		
	£	s.	d.	£	s.	d.	£	s.	d.
Canterbury	580	0	0	3	0	0	583	0	0

NOTE.—There are 15 maximum fees, including 38 boilers over 10 h.p. and 3 over 5 h.p.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Notice.	Description of Machinery.	Notice.	Particulars.
1889.			
April 22 ...	Goods-lift ...	Verbal ...	To attach safety-catches to cage.
June 21 ...	Flour-mill ...	Verbal ...	To protect belts and gearing, as directed.
July 1 ...	Biscuit factory ...	Verbal ...	To protect machinery of oven and copper-pan.
July 16 ...	Flax-mill ...	Written ...	To fence along line of shafting and belts.
July 16 ...	Flax-mill ...	Written ...	To reduce size of scutcher-mouth, and to have opening looking upwards.
July 30 ...	Flax-mill ...	Verbal ...	To protect counter-shaft from water-wheel.
Aug. 7 ...	Flax-mill ...	Written ...	To fence on each side of scutcher-belt, and close end of building to prevent thoroughfare.
Aug. 7 ...	Flax-mill ...	Verbal ...	To protect belts, and have traveller to carry away fibre. (Mill just erecting.)
Aug. 9 ...	Flax-mill ...	Written ...	To fence belt of scutcher, also to reduce size of mouthpiece of scutcher.
Sept. 24 ...	Flax-mill ...	Written ...	To protect fly-wheel of engine, counter-shaft, and to have traveller to carry away fibre.
Sept. 26 ...	Flax-mill ...	Verbal ...	To protect water-race and belt of scutcher; also directed as to mouth of scutcher erecting.
Oct. 16 ...	Flax-mill ...	Written ...	To have traveller to carry away fibre, rail to side of belt; also to alter scutcher-mouth, as directed. (Mill since burnt down.)
Oct. 22 ...	Flax-mill ...	Written ...	To erect foot-bridge with hand-rail along top of water-race, box over shaft from wheel to shed, alter mouth of scutcher, and add another bearing to scutcher-spindle.
Oct. 24 ...	Flax-mill ...	Verbal ...	To erect traveller to carry away fibre; also to alter scutcher-mouthpiece.
Nov. 22 ...	Dairy factory ...	Verbal ...	To close passage behind machinery by erecting hand-rail and gate.
Nov. 29 ...	Pottery-works ...	Verbal ...	To box over gearing of pug-mill.
Dec. 13 ...	Flax-mill ...	Verbal ...	To fence along side of stripper-belt.
Dec. 13 ...	Flax-mill ...	Verbal ...	To reduce size of scutcher-mouthpiece, and make the opening upwards.
1890.			
Jan. 30 ...	Flax-mill ...	Verbal ...	To reduce size of scutcher-mouthpiece, and make the opening looking upwards.
Feb. 21 ...	Printing ...	Written ...	To fence fly-wheel of gas-engine, or close doorway to prevent any thoroughfare past fly-wheel.

RETURN of MACHINERY INSPECTED in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1890.

Description of Machinery.	Steam.	Steam and Water.	Water.	Gas and Steam.	Description of Machinery.	Steam.	Steam and Water.	Water.	Gas and Steam.
Biscuit factories ...	2	...	...	...	Foundries and ironworks	25	...	...	...
Bacon factories ...	3	...	...	...	Gasworks ...	2	...	...	...
Breweries ...	9	...	...	...	Goods-lifts ...	...	...	...	3*
Brick- and tile-works ...	4	...	...	...	Heating (hospital) ...	1	...	...	...
Brush factory ...	1	...	...	...	Locomotive (contractors)	1	...	...	...
Baths ...	3	...	...	...	Meat-preserving ...	1	...	...	...
Bone-mill ...	1	...	...	...	Pumping (drainage)	1	...	...	...
Boiling-down ...	8	...	...	...	" (waterworks) ...	2	...	...	...
Blind factory ...	1	...	...	...	Printing ...	2	...	...	2
Butchers ...	26	...	...	...	Road-roller ...	1	...	...	...
Cabinet-making ...	7	...	...	...	Refrigerating-works ...	3	...	...	...
Carriage factories ...	2	...	...	...	Stone-breaking ...	1	...	...	...
Chaff-cutting ...	25	...	...	...	Soap-works ...	3	...	...	...
Collieries ...	2	...	...	...	Saw-mills ...	13	...	...	...
Coffee- and chicory-mills...	2	...	...	...	Seed-cleaning ...	2	...	...	...
Cooperage ...	2	...	...	...	Stone-sawing ...	1	...	...	...
Cordial factories ...	4	...	...	...	Tanneries ...	4	...	...	...
Chemical-works ...	2	...	...	...	Threshing-machines ...	96	...	...	...
Dock and slip ...	2	...	...	...	Traction-engines ...	55	...	...	...
Dairy factories ...	3	...	...	...	Tram-engines ...	6	...	...	...
Electric lighting ...	3	...	...	...	Wool-washing ...	5	...	...	...
Fire-engines ...	4	...	...	...	Wool-dumping ...	3	...	...	...
Firewood-sawing ...	5	...	...	...	Woollen-mills ...	3	...	...	...
Flock-mill ...	1	...	...	...	Winches and cranes ...	19	...	...	...
Flax-mills ...	12	5	1	...	Winding ...	1	...	...	...
Flour-mills ...	7	1	1	...	Well-sinking ...	3	...	...	...

* Gas.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with BOILERS and MACHINERY in the CANTERBURY DISTRICT during the Financial Year ended the 31st March, 1890.

Name and Address of Owner.	Description of Machinery.	Name and Age of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident, and Remarks.
Canterbury Roller Mills, Ashburton	Flour-mills, steam and water	Milner Buchanan, aged 35 years	Hand crush'd in cog-wheels	Not	The manager, Mr. D. H. Brown, writes, "It was entirely the man's own fault; while cleaning he allowed a bit of cotton waste to dangle, which caught the cogs and pulled in his hand." The hand was amputated.
Charles Chinnery, Rangiora	Flax-mill, steam and water	William Verrill, aged 38 years	Arm crushed in scutcher	Fatal	While scutching fibre his arm was drawn in and badly crushed; it had to be amputated at the shoulder. Blood-poison caused his death. Since this accident there is such an improvement in the scutchers that such an accident is not likely to occur again.
Lyttelton Times Company, Ch'ch Atlas Milling Company, Timaru	Printing, steam Flour-mill, steam	William Barlow, aged 30 years James Freeman, aged 19 years	Hand crush'd in rollers Fingers of right hand crushed	Not Not	While he was adjusting the paper his hand got between the rollers. The hand is quite well again. He was greasing cog-wheels through a small door left for that purpose when something attracted his attention in another part of the mill, when his fingers were caught.

RETURN of NOTICES given to REPAIR BOILERS in the CANTERBURY DISTRICT during the Financial Year ending 31st March, 1890.

Date.	Description of Boiler.	Notice.	Particulars of Repairs.
1889.			
April 3 ...	Vertical ...	Written ...	To rejoin check-valve and sludge-doors.
May 8 ...	Portable ...	Verbal ...	To renew gauge-mountings, and expand eight tubes.
May 25 ...	Vertical ...	Verbal ...	To remove one tube and plug-holes.
June 8 ...	Portable ...	Verbal ...	To recaulk bottom corner of fire-box.
July 2 ...	Cornish ...	Verbal ...	To chip and recaulk ring-seam of shell in bottom flue.
Aug. 12 ...	Traction ...	Verbal ...	To renew crown of fire-box.
Aug. 15 ...	Semi-tubular ...	Verbal ...	To renew tubes, also to rivet new plate on shell where cracked. (This crack was caused by a fall during erection.)
Aug. 22 ...	Vertical ...	Verbal ...	A new pressure-gauge.
Aug. 27 ...	Vat ...	Verbal ...	To renew top end of stays.
Oct. 2 ...	Portable ...	Written ...	New set of tubes, including stay-tubes.
Oct. 11 ...	Portable ...	Written ...	New set of tubes.
Oct. 14 ...	Portable ...	Written ...	To cut out crack in fire-box and fit a new plate with the six-screwed stays passing through new plate, as directed.
Oct. 15 ...	Cornish ...	Written ...	New pressure-gauge.
Oct. 16 ...	Vat ...	Verbal ...	To renew top ends of stays.
Dec. 2 ...	Vertical ...	Verbal ...	To remove blow-off cock to another part of boiler, and patch over present seat.
Dec. 3 ...	Vertical and vat ...	Verbal ...	To rivet strengthening-ring on man-hole, also to renew angle-iron ring and top ends of stays in vat.
Dec. 3 ...	Vertical ...	Verbal ...	New angle-iron ring in neck of uptake.
1890.			
Jan. 14 ...	Portable ...	Written ...	New set of tubes.
Jan. 21 ...	Locomotive ...	Written ...	To renew or properly repair fire-box, also renew skirt of shell at fire-box.
Feb. 19 ...	Portable ...	Written ...	New end-plate in shell of boiler, also new end-plate in fire-box.
Feb. 19 ...	Portable ...	Written ...	Cut out cracked plate in mouth of fire-box, and rivet on new plate.
Feb. 28 ...	Portable ...	Verbal ...	New pressure-gauge.

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the CANTERBURY DISTRICT during the Financial Year ended 31st March, 1890.

Date of Accident.	Owner's Name and Address.	Nature and Cause of Accident.
1889.		
April 9 ...	W. Cudden, Fendalton	Flour-mill burnt down. Boiler not injured; requires steam- and water-gauges renewed.
April 18 ...	Press Company, Christchurch	Reported boiler injured in furnace. Found furnace partial collapse, caused by thick scale-deposit on plates of furnace from not having been properly cleaned out.
June 24 ...	Lunatic Asylum, Christchurch	Reported vertical tubular boiler cracked on top. Found crown-plate required renewing. Caused by tubes being too crowded in boiler.
Aug. 12 ...	John Brown, Christchurch	Reported crown of fire-box of traction-engine down. Found crown required to be renewed. Caused by lowness of water.
Nov. 18 ...	E. H. Banks, Christchurch	Reported Cornish boiler leaking in furnace. Found collapse of furnace from lowness of water; found top had been bare of water from end to end. Several plates had to be renewed.
1890.		
Jan. 25 ...	Bowron Brothers, Woolston	Reported a leak in bottom to tubular boiler. Found a crack; had plate renewed. Caused by dirt.
Mar. 6 ...	Christchurch Meat Company, Islington	Reported bulge in furnace of Lancashire boiler. Found a bulge just above bars, caused by a deposit on inside, thus keeping the water away from plate. Boilers were dirty inside.

The INSPECTOR of MACHINERY, OTAGO DISTRICT, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Office of Inspector of Machinery, Dunedin, 25th April, 1890.

I have the honour to forward to you the annual report of the inspection of boilers and machinery in the Otago District for the financial year ended the 31st March, 1890, contained in the accompanying tables.

In the summary of inspections, the number of inspections are—Boilers, 609; hydraulic lifts, 52; steam elevator, 1; water-wheel, 1: total, 663. Of that number Mr. Blackwood inspected—Boilers, portable, 147; boilers, stationary, 92; hydraulic lifts, 39; water-wheel, 1: total, 279.

In forwarding this report to you I am pleased to be able to inform you that the iron-trade has materially improved during the year owing to the great start the mining-industry has taken, both in alluvial and quartz, but principally in river-dredging, which has been doing remarkably well, and which has every appearance of being a great source of wealth for many years to come.

There is a great amount of work on hand at the present time, and more coming forward.

The timber-trade is at present in a very backward state. During the building of the Exhibition a slight impetus was given to it, and also a very considerable amount of foreign shipments going on at the same time; but the one source of demand being closed and the other having dwindled down so much, it has caused a number of mills to work single-handed and also closed up others.

The harvest down South has been almost unprecedented in quality and quantity.

The flax-industry has taken a sudden rise, but seems at present to be in rather a backward state again. I may say that at all the mills I have visited there appears to me to be a great loss through the non-utilisation of the by-products, which I am confident with a little application could be made to yield a considerable profit, but which now entirely, or nearly so, goes to waste.

The flax-dressing is also turned out very imperfectly, there being no selection of cases, but all passing through indiscriminately, which certainly produces quantity but an inferior quality.

There has been a large increase of new boilers during the year, 56 having been added to last year's number; still a considerable number remain to be inspected at the end of March.

A great deal of time during the year has been occupied with marine work.

A great deal of time is also taken up in examining tracings presented by persons getting new boilers made; and also, afterwards, visiting these boilers in course of construction at the different shops; the whole of our time and advice, at present, given gratis.

The question arises whether a small fee should not be charged as an equivalent for the time taken up in overlooking and correcting these tracings; the fee to be charged according to horsepower; thus enabling the steam-user to get the highest class and pressure accordingly. This would also be a great benefit to the Inspector, giving him greater facilities in classification.

Remarks on Tables.

Return of Defects found on the Inspection of Boilers and Fittings.—This represents about the usual amount of tear and wear and renewals.

Return of Notices given to repair Boilers.—These repairs have all been done satisfactorily and without any trouble; steam-users, as a rule, always being willing to adopt any suggestions we may make; one boiler having been condemned.

Return of Accidents to Boilers and Machinery reported.—These are only two, but one of them might have been attended with disastrous results, the man in charge having taken out the blow-off cock-plug in order to clean out the pipes, the boiler being under steam with a strong fire. Fortunately, the door of the building was immediately opposite, through which the man escaped without injury. The other accident was simply trying to get up steam without water, and was therefore unattended with any danger.

Notice to fence Dangerous Parts of Machinery.—There has been nothing of sufficient importance requiring any notice.

Notice to remove Dangerous Parts of Machinery.—There was only one notice served, which was for two circular saws, both at the one mill. The saws were cracked for a distance of 10in. and 14in. respectively from the centre. It is rarely that cracked saws are worked about the large mills; generally the small mills. As this mill has changed hands there was no difficulty in their removal.

Return of Accidents to Life and Limb.—I am sorry to have to report one accident, which took place in the rope-works in South Dunedin. The machine is known as a drawing-frame. The boy is supposed to stand at one end and watch the hemp coiling into the tub, when he removes the full tub and replaces it with an empty one.

In case of any hemp fouling, his orders are to stop the machine at once; but in this case the boy thought he could manage to clear the obstruction without stopping the machine. For this purpose he went round the side, and put his arm underneath the chain-belt, when the belt caught his arm, tearing it off at the elbow. This is an extremely dangerous machine to meddle with while in motion. I visited the works next day, but nothing more can be done than there is at the present time. Printed instructions are placed up on the walls, instructing the boys to stop their machines at once when they see anything wrong; and there are also two men who do nothing else but attend to this, the proprietors sparing nothing that would be likely to obviate any such thing happening in the future.

Return of Hydraulic Lifts inspected.—As you will see by the table, we have not been able to get the owners in all cases to put on safety-catchers, a number of them being difficult to fix efficient catchers on; there are also a number of owners who object to the expense incurred.

In the case of new lifts being put up, in all cases the safety-catch is being adopted. I am pleased to be able to inform you that no accident of any kind has taken place with this machinery during the past year.

In the return of fees given for inspection of boilers and machinery, I may state that the minimum scale has been calculated in the table since January last.

I may also state that the reduction has found general favour among owners of machinery.

I have, &c.,

ALEXANDER CRAWFORD,

Lewis H. B. Wilson, Esq.,

Inspector of Machinery, Otago District.

Assistant Secretary, Marine Department, Wellington.

RETURN of MACHINERY INSPECTED in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Description of Machinery.	Steam.	Steam and Water.	Water.	Gas.	Description of Machinery.	Steam.	Steam and Water.	Water.	Gas.
Aërated water ...	1	...	...	...	Hoists ...	13	...	...	...
Agricultural-implement works	5	...	...	...	Hydraulic lifts ...	...	...	52	...
Air-compressor ...	1	...	...	...	Joineries ...	4	...	...	...
Bacon factory ...	1	...	...	...	Lathmaker ...	1	...	...	...
Bakeries ...	5	...	...	...	Laundries ...	2	...	...	...
Baths ...	1	...	...	...	Lead-pipe works	2	...	...	...
Barbed-wire factory	1	...	...	...	Locomotives ...	7	...	...	...
Beehive factory	1	...	...	...	Machine-shops ...	3	...	...	...
Boiling-down ...	6	...	...	...	Merry-go-round	1	...	...	...
Bone-mills ...	8	...	...	...	Meat-preserving	4	...	...	...
Brass-, copper-, and lead-works	2	...	...	...	Parchment-works	1	...	...	...
Breweries ...	11	...	...	...	Paper-mills ...	1	1	...	...
Brick- and tile-works	5	...	...	...	Potteries ...	3	...	...	...
Boring ...	1	...	...	...	Pipeclay-works	2	...	...	...
Butter factories	3	...	...	...	Pumping water...	4	...	...	...
Cable tramways	2	...	...	...	Plumbing ...	1	...	...	...
Cabinetmakers	4	...	...	...	Quartz-batteries	4	...	...	...
Cement-works ...	2	...	...	...	Refrigerating-works	3	...	...	...
Chaff-cutters ...	29	...	...	...	Rabbit-fur machinery	1	...	...	...
Chemical-works	2	...	...	...	Rope-works ...	1	...	...	...
Cooperage ...	1	...	...	...	Rolling-mill ...	1	...	...	...
Cocoa factory ...	1	...	...	...	Sausage-skins	1	...	...	...
Cooking ...	2	...	...	...	Sausage-machines	8	...	...	...
Collieries ...	8	...	...	...	Saw-mills ...	40	1	...	...
Coffee- and spice-works	3	...	...	...	Seed-dressing ...	2	...	...	...
Condensed milk	1	...	...	...	Sheep-dip ...	2	...	...	...
Confectionery ...	5	...	...	...	Soap-works ...	2	...	...	...
Corn-crushers ...	3	...	...	...	Soap- and candle-works	2	...	...	...
Cranes ...	13	...	...	...	Soda-crystal works	2	...	...	...
Cutlery ...	2	...	...	...	Spice- and coffee-works	3	...	...	...
Dairy factories	6	...	...	...	Starch-works ...	1	...	...	...
Dredges, harbour	2	...	...	...	Standard-works	2	...	...	...
Dredges, gold ...	6	...	...	...	Stone-crushers ...	4	...	...	...
Dye-works ...	4	...	...	...	Straw-pressers ...	2	...	...	...
Elevators ...	1	...	...	...	Stone-dressing ...	4	...	...	...
Electric light ...	1	...	...	...	Tanneries ...	5	...	...	...
Engine-shops	4	...	...	...	Threshing-machines	112	...	...	...
Engine-shops and foundries	8	...	...	...	Turning, wood	3	...	...	...
Foundries ...	3	...	...	...	Venetian-blinds	1	...	...	...
Fellmongeries ...	4	...	...	...	Wool-washing ...	3	...	...	...
Flour-mills ...	10	4	...	...	Wool-pressing ...	6	...	...	...
Flax-mills ...	33	...	1	...	Woollen factories	4	...	...	...
Flock-mills ...	2	...	...	...	Wool-mat factories	6	...	...	...
Fish-preserving	1	...	...	...	Wood-work factories	7	...	...	...
Fire-grate- and range-works	3	...	...	...	Wood-working	2	...	...	...
Firewood-cutting	6	...	...	...	Winding ...	2	...	...	...
Gasworks ...	3	...	...	...	<i>Appendix.</i>				
Gold-mining ...	7	...	...	...	Fish-bone manure	1	...	...	...
Graving-dock ...	1	...	...	...	Digesters ...	12	...	...	...
Grindery ...	1	...	...	...	Oil-mills ...	1	...	...	...
					Poudrette-works	1	...	...	...

RETURN showing the NUMBER of LAND BOILERS INSPECTED in the OTAGO DISTRICT during the Financial Year ended 31st March, 1890.

Name of District.	Number of Portable Boilers.			Number of Stationary Boilers.			Total.
	5 h.p. and under.	5 to 10 h.p.	Over 10 h.p.	5 h.p. and under.	5 to 10 h.p.	Over 10 h.p.	
Otago	50	187	11	161	49	151	609

RETURN of FEES payable for the INSPECTION of BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Name of District, &c.				Fees payable in respect of Boilers.	Fees payable in respect of Machinery.	Total.
OTAGO.				£ s. d.	£ s. d.	£ s. d.
Portable	...	...	...	383 0 0	...	930 10 0
Stationary	...	...	...	545 10 0	...	
Machinery	...	...	...	...	2 0 0	

RETURN of DEFECTS found on the INSPECTION of BOILERS and FITTINGS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Description.					Dangerous.	Ordinary.	Total.
Angle-irons, wasted digester	...	...	...	...	1	...	1
Crowns, wasted digester	...	...	...	...	...	2	2
Boiler-shell bulged over fire	...	...	...	...	...	1	1
Boiler-shell bulged over fire, outer shell	...	...	...	...	1	1	2
Crowns down	...	...	...	...	1	3	4
Corrosion, internal	...	...	...	...	...	2	2
Cylinder-joint leaking	...	...	...	...	...	1	1
Fire-box getting thin	...	...	...	...	1	2	3
Fire-box bulged	...	...	...	...	...	2	2
Fire-box patched	...	...	...	...	1	2	3
Fire-box leaking	...	...	...	...	...	2	2
Pressure-gauges	...	...	...	...	1	...	1
Water-gauges	...	...	...	...	...	6	6
Manhole	...	...	...	...	1	...	1
Mudhole	...	...	...	...	2	3	5
New furnace fitted	...	...	...	...	1	...	1
New fire-box	...	...	...	...	1	...	1
Fusible plugs	...	...	...	...	...	2	2
Stays, longitudinal, broken	...	...	...	...	...	1	1
Stays screwed, wasted	...	...	...	...	1	2	3
Steam-pipes	...	...	...	...	1	...	1
Seams over fire leaking	...	...	...	...	...	2	2
Stripped lagging	...	...	...	...	...	1	1
Tubes renewed	...	...	...	...	1	2	3
Tubes leaky	...	...	...	...	...	3	3
Tube-plate leaky	...	...	...	...	...	1	1
Test-cocks	...	...	...	...	...	7	7

RETURN of NOTICES given to remove DANGEROUS parts of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Notice.	Name and Address of Owner.	Nature of Machinery, and Cause of Removal.
26th February, 1890	New Zealand Pine Company, Invercargill, No. 1 Mill	Circular saws, two cracked — one 10in. from the centre, the other 14in. from the centre.

RETURN of NOTICES given to REPAIR BOILERS in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Notice.	Description of Boiler.	Nature of Repairs ordered.
1889.		
May 25 ...	Digester ...	New angle-irons in crown.
June 21 ...	Locomotive ...	Retubed.
June 28 ...	Vertical ...	New fire-box and uptake.
July 9 ...	Longitudinal tubular ...	One new plate put in at blow-off cock.
July 9 ...	Longitudinal tubular ...	Plate indented taken out and made good.
July 9 ...	Vertical ...	To be repaired at bottom of shell.
July 29 ...	Portable ...	Two longitudinal stays to be put in.
Aug. 8 ...	Vertical ...	Cylinder to be taken off and rejoined.
Oct. 3 ...	Cornish ...	Plate in crown of furnace to be cut out and renewed.
Oct. 18 ...	Vertical ...	Mudholes to be repaired.
Oct. 25 ...	Semi-portable ...	Fire-box to be patched at bottom and a number of screwed [stays put in.
Oct. 25 ...	Locomotive ...	New steam-pipes.
Oct. 29 ...	Longitudinal tubular ...	Seams on top of shell to be caulked.
Oct. 31 ...	Vertical ...	Plate to be put on at bottom of shell.
Nov. 4 ...	Cornish tubular ...	To be retubed.
1890.		
Jan. 3 ...	Portable ...	Mudholes to be repaired.
Jan. 7 ...	Portable ...	Fusible-plug and patch on crown.
Feb. 17 ...	Locomotive ...	Eight screwed stays to be renewed and mudhole patched.
Feb. 26 ...	Portable ...	Outer fire-box to be partly sheathed.
Feb. 26 ...	Semi-portable ...	At corner and mudholes repaired, part of crown-seams to be reriveted.
Feb. 26 ...	Portable ...	Two extra dog-stays to be fitted on crown of fire-box, and compensation-ring put round manhole.
Mar. 14 ...	Portable ...	A number of screwed stays to be renewed in fire-box.
Mar. 17 ...	Lancashire ...	Furnaces corroding, two small plates to be cut out and renewed, and also three others small.
Mar. 17 ...	Semi-portable ...	Condemned.

RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Notice.	Class of Machinery.	Parts requiring to be fenced.
Nil ...	Nil ...	Nil.

RETURN of ACCIDENTS to LIFE and LIMB which have occurred in connection with LAND BOILERS and MACHINERY in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Name and Address of Owner.	Description of Machinery.	Name of Person injured.	Nature of Accident.	Fatal or not.	Cause of Accident, and Remarks.
M. Donaghy and Co., So' Dunedin, 31st July, 1889	Rope-spinning machinery, known as drawing-machine	Edward Edwards, aged 14 years last May	Right arm torn off at elbow	Not	The boy at work stands in front of the machine where the fibre comes out and coils into his tub; this place he has no business to leave without first stopping his machine, but, as the lad states himself, he saw something requiring to be taken out, for this purpose he went round the side of the machine and put his right hand underneath the endless-chain belt, when his arm was caught and torn off at the elbow. It was amputated above the elbow. I called at the works on the 1st August, but could offer no suggestions for future prevention.

RETURN of ACCIDENTS to BOILERS and MACHINERY reported as having occurred in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Date of Accident.	Name and Address of Owners.	Nature and Cause of Accident.
1889. Sept. 23 ...	Dunedin and Sub-urban Gas Company (Limited), Caversham	Crown of furnace down and seams sprung (Cornish boiler), the blow-off cock having got choked up. The man in charge took out the plug to put a wire up to clean it out, when the water was blown out, the pressure at the time being about 30lb., with a strong coke-fire. Fortunately the man escaped at the door without injury.
Oct. 9 ...	William Wright, Great King Street, Dunedin	Vertical boiler. Firebox-crown sprung. It seems one man blew off the boiler at night and forgot to put any water in it; the man on watch coming on at 4 a.m. next morning commenced to fire up without looking to see if there was any water, springing the crown and seam of uptake.

RETURN of HYDRAULIC LIFTS inspected in the OTAGO DISTRICT during the Financial Year ended the 31st March, 1890.

Lifts inspected with Safety-catches all complete.	Lifts inspected without Safety-catches.	Lifts with Chains.	Lifts with Steel Ropes.	Lifts with Hemp Ropes.	Remarks.
12	40	48	3	1	Notices served to put on safety-catches, written, 18; verbal, 22.

SUMMARY of INSPECTIONS, OTAGO DISTRICT, for the Financial Year ended the 31st March, 1890.

Number of boilers ...	...	...	...	...	609
Number of hydraulic lifts ...	...	...	...	...	52
Number of steam-elevators ...	...	...	...	...	1
Number of water-wheels ...	...	...	...	...	1
					— 663
Number of machinery inspected ...	...	...	...	...	640
Number of defects found on inspection of boilers and fittings ...	...	...	...	...	62
Number of notices given to repair boilers ...	...	...	...	...	21
Number of accidents to boilers and machinery reported to Inspector ...	...	...	...	...	2
Number of notices given to fence dangerous parts of machinery ...	...	...	...	...	...
Number of notices given to remove dangerous parts of machinery ...	...	...	...	...	1
Number of accidents to life and limb reported...	1
Number of hydraulic lifts inspected	52

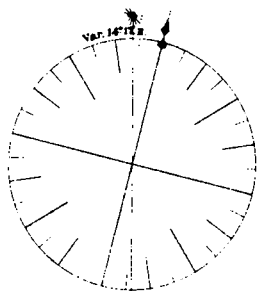
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NEW ZEALAND WRECK CHART

1ST APRIL 1889 TO 31ST MARCH 1890

Compiled from Official Records
in the
MARINE DEPARTMENT.



SYMBOLS.

STRANDINGS.

- X - - - Signifies a Total Loss.
- X - - - " Partial Loss.

COLLISIONS.

- ++ - - Signifies a collision between two steam-vessels with partial loss.
- +o - - Signifies a collision between a steamer and a sailing-vessel with partial loss.

CASUALTIES OTHER THAN BY STRANDINGS, COLLISIONS, OR MISSING VESSELS.

- - - - A total loss of a sailing-vessel.

Note.—Casualties resulting in slight damage are not shown on this chart.

