1904.

NEW ZEALAND.

INSPECTION OF MACHINERY:

ANNUAL REPORT OF THE DEPARTMENT FOR 1903-4.

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

The Hon. the ACTING MINISTER OF MARINE to His Excellency the GOVERNOR.

Inspection of Machinery Department,
Wellington, 1st July, 1904.

MY LORD,—

I do myself the honour to transmit herewith, for Your Excellency's information, the report of the Inspection of Machinery Department of the colony for the financial year ended the 31st March last.

I have, &c.,
C. H. MILLS,
Acting Minister of Marine.

His Excellency the
Right Hon. Lord Plunket, K.C.V.O.,
Governor of New Zealand.

The CHIEF INSPECTOR OF MACHINERY to the Hon. the ACTING MINISTER OF MARINE.

Inspection of Machinery Department,
Queen's Chambers, Wellington, 19th May, 1904.

SIR,—

I have the honour to submit herewith the annual report on the operations of the Inspection of Machinery Department for the twelve months which ended the 31st March, 1904:—

The work of the Department is practically up to date, with the exception of the inspection of a few boilers in the outlying parts of the Auckland District. This omission unfortunately occurred through one of the Auckland Inspectors being off duty from the 9th November, 1902, till the 28th June, 1903, and the Nelson Inspector being off duty from the 9th October, 1903, till the 8th January, 1904, both owing to illness. Only for this I think there would have been no arrears at the end of the financial year.

A considerable correspondence has taken place with manufacturers of machinery outside the colony regarding the manufacture of boilers intended for use in this colony. On the whole, it has been of a very pleasant nature, and most of the manufacturers have complied with our rules. To have a uniform system of rules for construction is very desirable, more especially in these days of high pressure and keen competition.

It is with pleasure I have again to report that no boiler-explosion has taken place in New Zealand during the year. I think no little credit is due to the staff of the Department for this desirable result. In looking over the returns connected with the reports of the Board of Trade upon the working of the Boiler-explosions Acts in Great Britain, I find that the average number of explosions per annum during the last twenty-one years amounts to sixty-nine, the number of lives lost to twenty-nine, and the number of persons injured to sixty-one. The number of formal investigations held in Great Britain into the circumstances attending boiler-explosions which occurred during the year ending the 30th June, 1903, was ten. The causes of these explosions have been clearly ascertained, and in no case has the explosion been attributable to unavoidable accident. Although there are incomparably more boilers in Great Britain than there are in New Zealand, still I think it is something to satisfy the most fastidious that this Department has done excellent work in safeguarding the interest of both owners and employees in seeing things safe for them in connection with the use of steam-power throughout the colony.

The number of boiler-inspections this year exceeds by nearly one thousand the number inspected in any previous year. The actual number is 5,416. The number last year was 4,463.

All the machinery in motion in connection with these was also looked over to see that the pulleys, shafting, and gearing attached to machines were safe for the employees. This is particularly safeguarded by the Inspectors, and the advice of the Inspector is often sought when new machinery is being erected.

The number of boiler certificates issued during the year totals 5,416, being an increase of 953 on the number issued last year.

Government Boilers.

The boilers and machinery at the various asylums and other Government institutions have all been inspected during the year.

A specification for a new boiler and engine for the Prisons Department, to be used in Wellington, was drawn up by the Department, and the tender for its manufacture was let in Wellington. The plant has since been completed and is working satisfactorily.

Defects in Boilers and Fittings.

A large number of defects were discovered both in boilers and their fittings. A full description of these is attached in the returns numbered 2 and 3. Many of them may be regarded as being very dangerous, and no doubt would have caused serious accidents if allowed to continue without repairs and alterations.

New Boilers.

The total number of new boilers added to our books during the year is 555, with a total of 7,495-horse power. Of this number 319 were imported, and the remaining 236 were made in the colony.

Amongst the largest installations are boilers at the power-stations at Dunedin and Wellington. The former are of the water-tube pattern, the latter of the Lancashire type.

Lifts, Gas- and Water-driven Machinery.

Two hundred and four hydraulic lifts, 81 driven by gas, steam, and electricity, 134 gas and hydraulic hoists and motors, 290 water-driven machinery, 779 gas-engines, 274 oil-engines, making a total of 1,762, were inspected during the year, being an increase of 378 over last year. A large amount of guarding was done in connection with the new machinery to make it safe.

Fencing of Machinery.

The usual amount of work connected with this has been done, and a return of the notices given, both verbal and written, is appended in the return numbered 4.

Examination of Engine-drivers.

The examinations have been conducted all over New Zealand, and have been held at the most central places to suit candidates. These examinations have grown in numbers to such an extent as to take up pretty well the whole time of two Inspectors, and add greatly to the clerical work of the office. The number this year far exceeds those of the previous year. The desire of those who have possessed the second-class certificates for the required time to qualify for the higher examination, and who have come up since, is very commendable, showing as it does the desire of self-improvement.

The examinations have been held at the following places during the year: Alexandra South, Auckland,* Blenheim, Christchurch,* Cromwell, Dannevirke, Dunedin,* Foxton, Gisborne, Greymouth,* Hokitika, Invercargill,* Lawrence, Motueka, Napier, Nelson,* Otaki, Pahiatua, Palmerston North,* Petone, Picton, Reefton, Roxburgh, Stratford, Takaka, Timaru,* Wairoa, Wanganui,* Wellington,* and Westport.*

Accidents.

I regret to record several accidents to persons connected with machinery. A detailed account of these is set out in Tables Nos. 5 and 6.

Districts and Inspectors.

A new district office was opened at Wanganui, which has proved a saving of much time and expense, and of great service to the Taranaki and Wanganui Districts.

Mr. S. Dalrymple was promoted from the Auckland District to take charge of the Wanganui office, and Mr. W. R. Douglas from the Wellington District to Auckland.

Mr. George McGregor, who had been an Inspector of Machinery for two years and three months, retired from the Service for a better appointment on the 10th October, 1903; Mr. Alexander McVicar, who had been an Inspector of Machinery for nearly seven years, retired on the 20th February, 1904, to better his position; and Mr. Henry Alexander McGregor, after twenty-nine years' service, retired on the 31st March, 1904, with three months' leave of absence. Mr. McGregor during the whole of this long period performed his various duties in a highly satisfactory manner, and gained the esteem of all those with whom he came in contact.

Mr. P. Grant was appointed a temporary Inspector of Machinery on the 26th May, 1903, for six months, to assist in the Wellington District, and in the following November he was appointed permanently.

Mr. C. W. R. Suisted was appointed an Inspector of Machinery, to assist in the Wellington District, on the 4th January, 1904.

Owing to the ever-increasing work at the Port of Napier and the large amount of machinery to be inspected on land in the Napier District, I think a district office should be opened there in the near future. Numbers of inquiries have been made for examinations for engine-drivers to be held in this district, but it has been quite an impossibility to meet all. If an Inspector were permanently placed in the district, he could meet these applicants at once. Any expense incurred in connection with the office would be more than met in the saving of time and expenses in travelling from Wellington every time an Inspector is wanted in Napier District.

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* Places at which more than one examination was held during the year.

Postal and Police Authorities.

The Department has been greatly indebted to both the Postal and Police Departments for their great assistance in connection with the collecting of boiler and machinery fees during the year, and for bringing defaulters into line. Only for this prompt action numerous fees would now be overdue. The police have also greatly assisted in the Court cases connected with owners who have been proceeded against for employing non-certificated engine-drivers to drive their machinery, and also in cases where the engine-driver has been prosecuted for driving without having the necessary certificate.

"The Inspection of Machinery Act Amendment Act, 1903."

This was only a short amending Act to get over a technical omission in the consolidating Act of 1902; also to make the competency and service engine-drivers' certificates that are issued by the Department of equal value, and to give the Department power to deal with non-certificated engine-drivers of winding, traction, and locomotive engines who should hold certificates, and are taking charge of these engines illegally.

Marine Engineers' Examinations.

These examinations have been held at the Ports of Auckland,* Wellington,* Christchurch,* Dunedin,* Gisborne,* Napier,* Wanganui,* Nelson,* Timaru,* Invercargill,* Picton, Greymouth, Westport, Hokitika, and at Palmerston North, during the year.

Return No. 16 gives the names of the successful candidates, and the various grades in which they passed; also the total number of applicants, the total fees payable, and the number who failed.

As usual, the applicants for examination for third-class engineers' certificates have been more numerous than in any other grade. The first- and second-class applicants have this year fallen off slightly, owing to the new regulations for examination of engineers defining the minimum horse-power of engines of steamers on which a candidate can qualify. The minimum nominal horse-power for first class is ninety-nine, and the minimum nominal horse-power for second-class is sixty-six. More than 50 per cent. of New Zealand steamers have engines of less than ninety-nine nominal horse-power, so that the opportunities for an engineer qualifying for the higher certificate are much reduced.

Survey of Ships.

This section of our work is practically up to date throughout the colony, nearly all the steamers having been surveyed during the year. Quite a number of sailing-ships have also been dealt with, and considerable repairs carried out to them.

Considerable attention has been paid by the Surveyors at the different ports to the fitting-up of ships' boats and rafts, so as to carry, without damage, provisions and water. In the case of rafts, the tanks containing water and biscuits have covers on each tank at both ends, so that, whichever side of the raft is uppermost, access can be had to the contents. This should add to the comfort of those who in future may have the misfortune to have to take to the boats or rafts after shipwreck. The usual amount of repairs to steamers has been carried out, and no defect has been discovered during the year attributable to a faulty survey.

These periodical surveys are carried out in a most careful manner, every part of the ship, both inside and out, being examined, including ballast-tanks, bulkheads, boilers, engines and all equipments. In some of the large boats the survey often takes a Surveyor a week, but it is much better to find out a defect in port than to repair damage on the high seas.

Survey of Ships for Seaworthiness.

This special and responsible work has taken up a good deal of time, especially at the Port of Wellington. The causes of such surveys have been of the usual kind, such as defects in machinery, including main steam-pipes, and grounding with supposed damage to hull-plating. In some cases docking had to be insisted upon, when in the opinion of the Surveyor considerable damage had been done to the hull. Nelson Harbour accounted for several mishaps to steam-vessels, through grounding in the fairway at the narrow entrance to the harbour.

The fees earned by these surveys amount to £80 17s.

Government Steamers.

The following Government steamers were surveyed during the year: S.s. "Tutanekai," s.s. "Janie Seddon," s.s. "Gordon," and the auxiliary oil-engine schooner "Countess of Ranfurly."

New Steamers.

Twenty-nine new steamers and vessels with oil-engines have been added to our books during the year. The names of these vessels are "Young Bungaree," "Enterprise," "Variance," "Rarawa," "Mangapapa," "Tainui," "Whakarire," "Scout," "Rubi Seddon," "Southern Cross," "Aida," "Akitio," "Ongarue," "Tu Atu," "Atapo," "Kawau," "Condor," "Pilot," "Purau," "Tawera," "Rotoiti," "Fire Fly," "Fire Float," "Piako," "Waitohi," "Duke," "Flirt," "Mahinapua," and "Kiwi."

A steel steamer to carry 400 tons is being constructed at the present time in Auckland by one of the engineering firms there, and is probably the largest steel steamer ever built in the colony. On my last visit to Auckland I inspected the work in progress, and found that a faithful and workmanlike piece of work was being turned out, which will, I think, when completed, be a credit to the colony. The machinery for the steamer is being made by a Wellington firm of engineers. It is of the compound type, with cylinders 19 in. and 38 in. diameter with a 24 in. stroke. The steamer is intended for the West Coast trade, and will have a light draught to enable her to work the bar harbours on that coast.

* Places at which more than one examination was held during the year.

Survey of Steamers Return.

A return numbered 17 gives the number of steamers surveyed by the Department for the period ended the 31st March, 1904, including the names of steamers, tons register, horse-power, nature of machinery and propeller.

The number of steamers and oil-engine vessels surveyed was 296, the number of surveys made being 336.

The fees payable in respect of such surveys amounted to £1,623 10s.

Survey of Sailing-ships Return.

There were ten sailing-vessels surveyed during the year, and the number of surveys made was eleven. Particulars of size and description will be found on Return No. 18. The fees payable amounted to £88.

Returns.

Appended are the returns in detail, numbered 1 to 20.

1. Number and class of boilers inspected, and fees payable on these; the machinery inspected, and the fees payable thereon; and the classes and numbers of engine-drivers' certificates issued, and the fees payable therefor.
2. Return of defects found on inspection of boilers.
3. Return of notices given to repair boilers.
4. Return of notices given to fence dangerous parts of machinery.
5. Return of accidents which were not fatal.
6. Return of accidents which proved fatal.

7, 8, 9, 10, 11, 12, 13, 14, and 15. Names of all persons to whom land stationary certificates of competency and service have been granted during the year.

16. List of persons who were examined for marine engineers' certificates of service and competency.
17. Return as to steamers and oil-engine vessels surveyed during the year.
18. Return as to sailing-vessels surveyed during the year.
19. Return of vessels surveyed for seaworthiness, &c., during the year.
20. Return showing sums earned or received and amount spent during the financial year for inspection of machinery, examination of engineers and engine-drivers, and survey of steamers.

I have, &c.,

Robert Duncan,

Chief Inspector of Machinery, Principal Engineer Surveyor of Steamers and Chief Examiner of Marine Engineers and Land Engine-drivers.

The Hon. the Acting Minister of Marine.

RETURNS.

No. 1.

(*a.*) RETURN showing the NUMBER of LAND STATIONARY BOILERS and MACHINERY INSPECTED for which CERTIFICATES are issued, for the Financial Year ended the 31st March, 1904.

Boilers—

Stationary—Five-horse power and under, 1,144; 10-horse power and over 5-horse power, 855; over 10-horse power, 1,448; digesters, 230: total, 3,677.

Portable—Five-horse power and under, 172; 10-horse power and over 5-horse power, 1,235; over 10-horse power, 293: total, 1,700.

Total boilers, 5,377.

Machinery—

Hydraulic lifts, 204; gas lifts, 28; gas and water lifts, 9; oil lifts, 4; electric lifts, 30; steam and water lifts, 12; gas and hydraulic hoists and electric motors, 134; water-engines, water-motors, and water-wheels, 124; Peltons, 81; turbines, 85; gas-engines, 779; oil-engines, 270; steam machinery, 2: total machinery, 1,762.

Grand total, 7,139.

(*b.*) RETURN showing FEES PAYABLE for the INSPECTION of BOILERS and MACHINERY, and for the ISSUE of ENGINE-DRIVERS' CERTIFICATES during the Financial Year ended the 31st March, 1904.

Fees payable—On boilers £6,151 10s., on machinery £255 12s. 6d.; total £6,407 2s. 6d.: for engine-drivers' certificates issued, £512 5s.: total, £6,919 7s. 6d. Government boilers and lifts inspected, but not charged, represent the further sum of £65 17s. 6d.

The cash actually received for boilers and machinery and paid into the Public Account amounted to £6,270 7s. 6d. The difference is caused by boiler-owners paying late fees. The cash actually received and paid into the Public Account for engine-drivers' application fees amounted to £560 19s. for the financial year ended the 31st March, 1904. This amount includes fees for certificates not yet issued.

(*c.*) RETURN showing the NUMBER of SERVICE and COMPETENCY CERTIFICATES issued to WINDING and TRACTION and LOCOMOTIVE ENGINE DRIVERS, and to STEAM-STATIONARY-ENGINE DRIVERS, during the Financial Year ended the 31st March, 1904.

Steam winding: Competency, 23; fees, £11 10s.

Traction and locomotive: Service 1, fees 2s. 6d.; competency 191, fees £95 10s.: total fees, £95 12s. 6d.

Steam stationary: Service—First class 63, fees £7 17s. 6d.; second class 33, fees £4 2s. 6d; restricted second 1, fees 2s. 6d.: total service, 97; total fees, £12 2s. 6d. Competency—Extra first class 7, fees £7; first class 181, fees £181; second class 410, fees £205: total competency, 598; fees, £393: total fees, £405 2s. 6d.

Summary of certificates issued: Service—Traction and locomotive, 1; stationary, 97; total, 98: fees, service, £12 5s. Competency—Steam winding, 23; traction and locomotive, 191; stationary, 598: fees, £500.

Total: Steam winding certificates, 23; fees, £11 10s. Traction and locomotive certificates, 192; fees, £95 12s. 6d. Stationary certificates, 695; fees, £405 2s. 6d. Total certificates, 910; total fees, £512 5s.

No. 2.

RETURN of DEFECTS found on Inspection of Boilers during the Financial Year ended the 31st March, 1904.

Description of Defects.	Dangerous.	Defective in Lesser Degree.	Total.
Boiler-bottom bulged	2	12	14
Boilers dirty	3	22	25
Bottom of boiler thin	2	4	6
Bottom of fire-box thin	1	5	6
Brickwork defective	...	12	12
Circumferential seams grooved	1	1	2
Crown badly bulged	3	8	11
Crown slightly down	...	13	13
Crown thin round fusible plug	...	8	8
Firebox bulged	6	47	53
Firebox-front thin	...	1	1
Firebox-landings cracked	...	2	2
Firebox leaky at corners	...	2	2
Firebox tube-plate thin	1	2	3
Furnaces pitting	...	6	6
Grooved round neck of uptake	...	6	6
Furnaces cracked	4	...	4

RETURN OF DEFECTS—*continued.*

Description of Defects.	Dangerous.	Defective in Lesser Degree.	Total.
Laminated plate, firebox	...	1	1
Longitudinal stays wasted	...	16	16
Manhole-doors bad	3	10	13
Manhole-studs bad	...	12	12
Patches defective	...	6	6
Rivets in manhole-door bad	...	5	5
Screwed stays wasted	...	17	17
Shell much corroded	...	36	36
Shell slightly corroded	...	51	51
Sludge-doors bad	6	12	18
Sludge-doors studs bad	...	20	20
Thin round check-valve	...	1	1
Thin round mud-doors	10	48	58
Tubes pitted	1	4	5
Tubes thin	...	24	24
Tube-plates bad	2	13	15
Tube-plates pitting	...	7	7
Uptakes thin	2	9	11
Wasted at blow-off cock	...	10	10
Wasted on crown	...	10	10
Totals	47	463	510

DIGESTERS found to be defective on Inspection during Financial Year ended the 31st March, 1904.

Description of Defects.	Dangerous.	Dangerous in Less Degree.	Total.
Internal corrosion	2	...	2
Centre stay bad	1	1	2
Number of bad rivets	...	6	6
Riveting bad in doors	...	6	6
Riveting of pipe-flange defective	...	1	1
Top plates thin, and number of bad rivets	2	2	4
Totals	5	16	21

DEFECTIVE FITTINGS found on Inspection of Boilers for which Notice was given to renew during Financial Year ended the 31st March, 1904.

3 Blow-off cocks fitted with new pins in glands.
1 Blow-off cock repaired.
1 Check valve fitted with new studs.
4 New spring balances.
1 New flange and pipe for blow-off cock.
8 New sets water-gauge mountings.
1 New stop-valve.
4 New blow-off cocks.
2 New blow-off pipes.
1 New screwed pin in end of blow-off cock.
2 New safety-valve chests.
13 New manhole-doors.
18 New sludge-doors.
1 New water-gauge pipe.
4 New sets of test-cocks.
6 New fusible plugs.
1 New pipe for water-gauge.
1 New flange for steam-pipe.
14 Steam-gauges.
6 Safety-valves.
1 Safety-valve to repair.
5 Sets of water-gauge cocks fitted with new handles.
4 Test-cocks repaired.
22 Water-gauge mountings repaired.

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No. 3.—RETURN of NOTICES given to REPAIR BOILERS during the Financial Year ended the 31st March, 1904.

Number.	Type.	Description of Repairs.
2	Cornish ...	Shell patched at blow-off cock.
4	" ...	Patches fitted on bottom of shell.
1	" ...	Patch on front of boiler extended.
1	" ...	A number of rivets in shell renewed.
2	" ...	Furnace patched.
2	" ...	Patch fitted on top of boiler under stop-valve.
1	" ...	Four new stays fitted.
1	Cornish tubular ...	Furnace-crown patched.
1	" ...	Small patch on shell.
1	" ...	Retubed.

RETURN of NOTICES given to REPAIR BOILERS—*continued.*

Number.	Type.	Description of Repairs.
1	Cornish tubular ...	Brickwork repaired.
1	Lancashire ...	New manhole-door fitted.
1	Locomotive ...	Firebox tube-plate renewed.
2	" ...	New firebox.
3	" ...	Retubed.
1	" ...	Manhole cut and door fitted; five stay-tubes fitted.
1	" ...	Three new tubes fitted.
1	" ...	Firebox-stays in throat-plate renewed.
1	" ...	Forty-three new tubes and four new mud-plugs fitted.
1	" ...	Patch on front renewed.
1	" ...	Bottom of barrel renewed.
1	" ...	Patch fitted round furnace-door.
1	" ...	Six new stays fitted to strengthen tube-plate.
1	" ...	Compensating-ring fitted round sludge-door.
1	" ...	Tubes expanded.
1	" ...	Six new screwed stays fitted in firebox.
1	" ...	Twelve new screwed stays fitted in firebox.
1	Marine	Five rings put round furnaces to strengthen them.
1	"	Bottom of combustion-chamber patched.
10	Multitubular ...	Retubed.
1	" ...	Back tube-plate patched.
11	" ...	Compensating-rings fitted round door-openings.
4	" ...	New manhole-doors fitted.
2	" ...	New sludge-doors fitted.
2	" ...	New studs in manhole-doors.
9	" ...	Patch fitted on bottom of shell.
1	" ...	Manhole-door repaired.
2	" ...	Manhole-door reriveted.
3	" ...	Top of steam-dome patched.
1	" ...	Patch fitted under blow-off cock.
2	" ...	Angle-iron ring riveted to manhole-door.
1	" ...	Doubling plate at manhole reriveted.
4	" ...	Patch fitted between safety-valve and boiler.
1	" ...	New crown in steam-dome.
1	" ...	New tube-plate.
1	" ...	Patch fitted over laminated plate.
2	" ...	Steam-space stays renewed.
1	" ...	Edge of sludge-hole in front tube-plate chipped round; new door, dog, and nut fitted.
2	" ...	Two rows of tubes drawn and boiler cleaned.
1	" ...	A number of rivets renewed.
2	" ...	Six new stay-tubes fitted.
1	" ...	Extra stay-tube fitted.
1	" ...	Fifteen stays fitted.
2	" ...	Front tube-plate patched.
1	" ...	Patch fitted under steam-dome.
1	" ...	Three new tubes fitted.
1	" ...	Part of furnace-crown cut out and patched.
1	" ...	Top row of tubes renewed, and patch fitted on bottom of shell.
1	" ...	Two new tubes and bolted patch on tube-plate.
25	Portable ...	Retubed.
1	" ...	New firebox.
48	" ...	Compensating-rings fitted to sludge-doors.
7	" ...	New sludge-doors.
13	" ...	A number of screwed stays renewed.
10	" ...	Crown-stays renewed.
5	" ...	New studs in sludge-doors.
1	" ...	Cross dogs fitted; patched along bottom and crown of firebox, patch fitted on barrel.
3	" ...	Tube-plate patched.
1	" ...	Thirty-eight new screwed stays fitted.
10	" ...	Steam-space stays renewed.
20	" ...	Firebox patched.
1	" ...	New firebox fitted; new girder-stays on crown; all new screwed stays; retubed; two new longitudinal stays.
4	" ...	Three new tubes fitted.
1	" ...	Two new main stays and two patches fitted.
1	" ...	Wheel-bracket taken off and patch fitted underneath.
1	" ...	Patch 16 in. by 10 in. put on under barrel.
1	" ...	Patch fitted on under pump.
1	" ...	Extra girder put on crown, and five new tubes.
1	" ...	All tubes drawn and boiler cleaned.
2	" ...	New girders and bolts fitted.

RETURN of NOTICES given to REPAIR BOILERS—*continued.*

Number.	Type.	Description of Repairs.
1	Portable ...	Patch put on tube-plate with stay through centre; also extra girder on crown of firebox.
1	" ...	Eight new rivets in tube-plate.
3	" ...	Patch fitted on throat-plate, and five new stays.
1	Semi-portable ...	Two new stays and two new compensating-rings.
2	" ...	Compensating-rings fitted to sludge-doors.
1	" ...	Manhole cut and new door fitted; twelve stay-tubes fitted.
1	" ...	Patch fitted on side of firebox.
1	" ...	A number of screwed stays renewed.
4	Semi-tubular ...	Retubed.
3	" ...	Patched on bottom of shell.
4	" ...	Tubes beaded and ferrules fitted.
1	" ...	Eight tubes renewed and two patches put on shell.
1	" ...	Patch fitted on back end of boiler, patch on crown of dome, patch on bottom.
1	" ...	New sludge-door.
11	Traction ...	Retubed.
2	" ...	New firebox.
13	" ...	Fireboxes patched.
1	" ...	New crown-girders.
4	" ...	Patch fitted under blow-off cock.
1	" ...	New sludge-door.
3	" ...	New studs in sludge-doors.
1	" ...	New studs in manhole-door.
6	" ...	Compensating-rings fitted to sludge-doors.
1	" ...	Patch 10 in. by 10 in. on firebox and two compensating-rings on sludge-door.
1	" ...	Two extra stays put in firebox.
1	" ...	Three new tubes.
1	" ...	Twenty new tubes.
3	" ...	Number of new stays in firebox.
1	" ...	New furnace-crown.
1	" ...	New tube-plate, new front plate, new girders, and new tubes.
1	" ...	Six new stays on top of firebox; also extra girder on top of firebox.
1	" ...	Six new tubes.
1	" ...	Tubes expanded and ferrules fitted.
2	" ...	New stays in firebox.
1	Vertical flue ...	Patch fitted on shell under stay.
3	" ...	New uptake fitted and compensating rings round sludge-doors.
1	" ...	Three patches fitted on firebox.
1	" ...	Patch put under blow-off cock.
1	"	Four new rivets in bottom landing.
1	" ...	Bottom half of shell renewed.
4	" ...	Firebox patched.
4	" ...	Compensating rings on sludge-doors.
1	" ...	Six new stays in crown.
1	" ...	Patch fitted under safety-valve chest.
2	" ...	New uptake.
2	" ...	Patch fitted on top of boiler round uptake.
2	" ...	New manhole-door.
1	" ...	Patch fitted over crack in furnace.
1	" ..	Patch under check-valve.
1	Vertical field tube	Sixteen new tubes fitted.
2	"	Compensating-ring, sludge-doors.
2	" ...	Edge of manholes chipped round and new doors fitted.
1	Vertical portable ...	New tubes fitted.
14	Vertical tubular ...	Retubed.
6	" ...	New crown and tubes.
2	" ...	Patch under check-valve.
1	" ...	Patch fitted round bottom of boiler.
1	" ..	New furnace and tubes.
2	" ...	Tubes expanded and ferrules fitted.
1	" ..	Three new tubes.
1	" ...	New stay in centre of tube-plate.
1	" ...	Patched round ash-pit.
1	" ...	Riveting round furnace-door renewed.
1	" ...	Patch on side of shell.
1	" ...	Patch 20 in. by 17 in. fitted under cylinder.
1	" ...	New tube-plate.
10	" ...	Compensating-rings fitted to sludge-doors.
6	" ...	New sludge-doors.
1	Water-tube ...	New uptake and downtake tubes.
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No. 4.—RETURN of NOTICES given to FENCE DANGEROUS PARTS of MACHINERY, &c., during the Financial Year ended the 31st March, 1904.

Number.	Machinery.	Particulars.
1	Bacon-factory	Belting.
1	Box-factory	Belts and pulleys.
1	Biscuit-factory	Mixing-machine.
2	Breast water-wheel	Wheel and race.
5	Brickmaking-machines	Fly-wheel and belts.
1	Brewery	Belts.
1	Butchery	Fly-wheel and belts.
1	Chaff-cutting	Wheel.
4	Cheese-factory	Fly-wheel.
1	Cooperage	Belting and pulleys.
2	Cordial-factory	Belting and pulleys.
28	Creamery	Fly-wheel.
42	Dairy factory	Churns and fly-wheels.
1	Dredge	Countershaft and winch.
14	Electric motors	Belting, &c.
1	Flaxmill...	Fly-wheel.
1	"	Intermediate shaft.
1	"	Scutcher.
19	"	Belting, pulley, &c.
4	"	Repair, scutcher-mouth.
1	"	Guard shaft and strengthen drum of scutcher.
2	Flour-mill	Guard intermediate reels, bran-duster, silks, and vertical shaft.
44	Gas-engines	Belting and pulleys
21	"	Fly-wheels.
4	"	Fit sleeve over end of shaft.
1	"	Guard length of shaft near floor.
1	"	Protect key in end of shaft.
1	Gas lift	Sink keyways in shaft for spur and chain wheels.
1	Gold-dredging	Belting and pulleys.
1	"	Fly-wheel, and repair handrail.
1	"	Mitre-wheel of screen.
1	"	Winch and pinions.
2	Hydraulic lift	Floor-openings.
3	"	Fit safety-catches.
15	"	Renew ropes.
2	"	Anneal chains.
1	"	Fit new spring.
2	High-breast water-wheel	Wheel and belting.
1	Joiner's shop	Belts.
1	Laundry	Fly-wheel.
1	Oil-engine	Fit new loose pulley.
31	"	Fly-wheels, pulleys and belting.
6	"	Fit sleeve over end of shaft.
3	"	" "
1	"	Fit door to engine-house.
22	Overshot water-wheel	Water-race and wheel.
3	Pelton wheel	Belting.
1	Portable engine	Fence fly-wheel.
2	Printing-machines	Fly-wheel and belts.
2	Quartz-crushing machinery ...	Belting and pulleys.
10	Sawmills	Fly-wheel of engine.
35	"	Belting, pulleys, &c.
2	Sash and door factory	Guard emery wheels.
3	"	Belting and pulleys.
1	Stone-crushing	Belting and wheels.
1	Tannery	Belting.
15	Turbines	Wheel and belts.
1	Turbine	Straighten shaft and fence belt.
4	Undershot water-wheels	Belting, &c.
1	Winding-engine	Fence drum.
382		

No. 5.—RETURN of ACCIDENTS (not Fatal) in connection with Machinery during the Financial Year ended the 31st March, 1904.

Name and Address of Owner.	Description of Machinery.	Name and Age of Person injured.	Date and Nature of Accident.	Cause of Accident, and Remarks.
Robertson and Co., Phœnix Foundry, Wellington	Drilling-machine	J. Douglas; aged 19	16th April, 1903: second and third fingers on left hand crushed in bevel-wheels	Inadvertently put his left hand on the bevel-wheels.
New Zealand Insurance Company, Dunedin	Passenger-lift ..	Robert John Richardson; aged 16	11th May, 1903: two toes amputated	Foot caught over edge of cage by floor of first landing.
John Anderson, Lyttelton	Drill	Robert Miln; aged 17	13th May, 1903: left arm broken above wrist	Caught in drilling-machine.
Luke and Co., Wellington	Lathe	W. Tilsley; aged 18	14th May, 1903: back of hand cut	Hand slipped and came against cutter of lathe.
Aulsebrook and Co., Christchurch	Chocolate-dipping machine	Kate O'Callaghan; aged 17	11th June, 1903: cut on left hand	Put hand in the way of dipping-tray while in motion.
Charles Lambeth, Blackball	Surface-planer ..	Charles Lambeth; aged 36	20th June, 1903: part of two fingers taken off	Over-haste; no fault of machine.
Greenstone Creek Gold-dredging Company, Kumara	Winch ..	Albert Lake; aged 23	29th July, 1903: left arm torn off	Tightening up bolt while winch was in motion.
Webster and Co., Allerton Works, Princes Street, Woolston	Hide-splitting machine	George Smith; aged 32	3rd August, 1903: top of forefinger cut off	Finger caught by band knife of splitting-machine.
City of Wellington Electric Light and Power Company (Limited), Wellington	Babcock and Wilcox boiler	John Tollan; aged 39	18th August, 1903: burnt left hand	Explosion of coal-gas in furnace, and flame burst out of door.
W. Cable and Co., Lion Foundry, Wellington	Lathe ..	R. Eckford; aged 19	19th August, 1903: while drilling, carrier slipped and hand was caught and badly cut	Carelessness.
Drew, McCrorie, and Co., Brunner Buildings, Wellington	Sewing-machine driven by belt; motive power, electricity	Ethel Stewart; aged 19	20th August, 1903: broken arm	Putting on belt (which had slipped off) against orders.
Aulsebrook and Co., Christchurch	Nougat-cutter (a circular machine knife)	Patrick Nolan; aged 18	20th August, 1903: cut little finger left hand	Attempting to cut a piece of string.
Royal Waimumu Gold-dredging Company, Mataura	Winch ..	Charles Thomsen.; aged 31	18th September, 1903: bruised	Tightening bolt while winch in motion, although warned. His coat was caught and he was carried round shaft.
W. Cable and Co., Lion Foundry, Wellington	Shaping-machine	C. Brown; aged 17	21st September, 1903: top of finger taken off	Carelessness.
Rockyside Brick-works, Caversham, Dunedin	Brick-machine..	George McLachlan; aged 37	24th September, 1903: middle finger right hand crushed in cog-wheels and had to be amputated	Looking for nut (while machinery in motion) with lighted match, drawing back his hand his finger was caught.
Aulsebrook and Co., Christchurch	Mixer	John O'Malley; aged 15	13th October, 1903: crushed two first fingers of right hand	Taking dough out of mixer while in motion. Had been warned several times.
W. Cable and Co., Lion Foundry, Wellington	Circular saw ..	Hugh Hutcheson; aged 22	17th October, 1903: finger cut	Carelessness.
Andersons (Limited), Canterbury Foundry, Christchurch	Drilling-machine	A. Brightling: aged 17	21st October, 1903: flesh-wound on right arm	Reaching under drill while in motion, his clothing caught.
W. A. J. Dutch, Victoria Street, Wellington	Flanging-machine	B. Dixon; aged 18	22nd October, 1903: crushed thumb	Not watching his work.
Aulsebrook and Co., Christchurch	Almond-mill ..	Hy. P. Dobbs; aged 19	10th November, 1903: fingers of right hand torn and bruised	Hand placed accidentally between roller and spindle of machine.
More and Sons, Sawmillers, Riverton	Circular saw ..	Alex. Brown; aged 24	16th November, 1903: part of little finger on left hand cut off	Attempting to remove a chip.
Andersons (Limited), Lyttelton	Hydraulic lift ..	H. Bunting; aged 28	25th November, 1903: right hand caught and bruised	Carelessness.
W. Cable and Co., Lion Foundry, Wellington	Milling-machine	H. R. Evans; aged 18	14th December, 1903: finger taken off by cutters of machine	Carelessness.
Gear Meat Company (Limited), Wellington	Fleshing-machine	James Bentley; aged 30	18th January, 1904: wounded first finger right hand	Pelt slipping when being fleshed.
Kauri Timber Company, Tairua	Winch ..	John Curry; aged 15	10th February, 1904: thumb and hand cut	Hand caught in cog-wheels while moving pinion.
A. Fredsberg and Sons, Paeroa	Flax-mill machinery	W. Frew; aged 27	12th February, 1904: broken thigh and arm	Hand entangled in belt putting it on.
McHardy Bros., Blackhead, Waipawa	Threshing-mill ..	Anders Halvoisen; aged 46	20th February, 1904: right leg taken off and amputated above the knee	Slipped and fell into drum of mill when going to feed the mill.
Smith and Smith, Sawmillers, Christchurch	Saw-bench ..	John Goodchild; aged 24	29th March, 1904: tips of two fingers of left hand cut off	Allowed hand to get too near saw.

No. 6.—RETURN of ACCIDENTS which proved FATAL in connection with Machinery during the Financial Year ended the 31st March, 1904.

Name and Address of Owner.	Description of Machinery.	Name and Age of Person injured.	Date and Nature of Accident.	Cause of Accident, and Remarks.
A. W. Jackson, Blenheim	Circular saw ..	Herbert William Jackson; aged 19	27th July, 1903: struck by piece of wood	Struck in abdomen by piece of wood with which he was feeding the saw.
Hawera Bacon-factory, Hawera	Shafting driven by turbine	Ernest Edward Cranage Goodson; aged 26	18th August, 1903: caught by shaft and whirled round	Putting belt on shaft while in motion.
Parker, Lamb, and Co., Freeman's Bay, Auckland	Sawmill ..	Thomas James Parkinson; aged 21	26th August, 1903: ruptured intestine	Helping to shift belt with a stick, and was struck by the stick.
Bagnall Bros., Turua ..	Sawmill ..	Winiata Kevei; aged 16	15th September, 1903: lower part of left leg torn off	Placing foot under guard and on revolving shaft.
Bursell and Blick, Blind River	Fencing-machine	Harold Stanton Gill; aged 9	23rd December, 1903: carried round shaft	Clothes torn off, arm and leg broken, with internal injury.
Charles Lambeth, Invercargill	Wood surface planer	Arthur Jackson; aged 19	5th February, 1904: lost part of finger	Timber tipped over and brought hand in contact with the knives.
John Mitchell, Princes Street, Dunedin	Super-calendar rolls for glazing paper	John Harbour; aged 34	5th February, 1904: left hand crushed	Hand caught in roll and crushed; was on wrong side of machine. Lockjaw set in and patient died.
Charles Leech, Flax-mill, Rangiora	Flax-dressing ..	Herbert Thompson; aged 15	6th February, 1904: both legs broken	Foot caught in loop of belt (after removing same from pulley) and he was carried round shaft.
Morton and Co., Customs Street, Auckland	Lift	Stanley Bennett; aged 14	23rd March, 1904: crushed by lift coming down on him	Carelessness. Boy was leaning over shaft when supposed to be packing tea.

No. 7.—RETURN of STEAM-WINDING-ENGINE DRIVERS to whom CERTIFICATES of COMPETENCY have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
William Arthur Chellew	Winding, competency ...	May 19 ...	261
James Robertson Thomson	" ...	" 19 ...	262
John Benjamin Morris	" ...	August 28 ...	263
James McMinn	" ...	" 28 ...	264
Thomas Russell	" ...	" 28 ...	265
Charles Joseph Bennett	" ...	" 28 ...	266
Thomas Howe	" ...	October 27 ...	267
John Carroll	" ...	" 27 ...	268
Raymond Fitzmaurice	" ...	" 27 ..	269
William Edwin Kennard	" ...	" 27 ...	270
John Morrison	" ...	" 27 ...	271
William Herbert Thompson	" ...	" 27 ...	272
Robert Scott	" ..	" 27 ...	273
Robert Inglis	" ...	December 24 ...	274
Hull Ingram Murphy	" ...	" 24 ...	275
Joseph Kneebone	" ...	" 24 ...	276
William Annear	" ...	" 24 ...	277
Issac Moore	" ...	" 24 ...	278
		1904.	
William Tweeddale	" ...	February 23 ...	279
David Baird Rutherford	" ...	" 23 ...	280
Leslie Jacob Churchill	" ...	" 23 ...	281
John Kennedy	" ...	March 29 ...	282
Robert Stewart Young	" ...	" 29 ...	283

No 8.—RETURN of TRACTION- and LOCOMOTIVE-ENGINE DRIVERS to whom CERTIFICATES of SERVICE have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Charles George Langham	Traction and Locomotive, service	December 24	546

No. 9.—Return of Traction- and Locomotive-engine Drivers to whom Certificates of Competency have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Chris. Matheson	Traction and Locomotive, competency	May 19	887
Dugald Stewart	Ditto	" 19	888
John Tyrell Weekes	"	" 19	889
John Adams	"	" 19	890
William Fitzgerald	"	" 19	891
John Johnston	"	" 19	892
James Gatehouse Rout	"	" 19	893
Edwin Walter Body	"	" 19	894
William Andrews	"	" 19	895
David Gibson Coulter	"	" 19	896
Charles Henry Kerins	"	" 19	897
Thomas McLachlan	"	" 19	898
Arthur Smith	"	" 19	899
John Owen Cantwell	"	" 19	900
Richard Perry	"	" 19	901
John Francis Strange	"	" 19	902
Edward Samuel, sen.	"	" 19	903
Frederick Crane	"	" 19	904
David Calder Groves	"	" 19	905
Thomas Hewton	"	" 19	906
John Law, jun.	"	" 19	907
Thomas Jenkins	"	" 19	908
Samuel Templeton	"	" 19	909
Vincent Henry Dodson	"	August 28	910
Mark Lodge	"	" 28	911
John Frederick Charles Philpott	"	" 28	912
Watson Raymond	"	" 28	913
George John Frederick Windleborn ...	"	" 28	914
George Thomas Athold Barnes	"	" 28	915
Frederick William Drummond	"	" 28	916
Charles Corder	"	" 28	917
Augustine Thomas Edward Fairhall ...	"	" 28	918
Walter Ernest Gibbons	"	" 28	919
Walter Herbert Smart	"	" 28	920
Alexander Sutherland	"	" 28	921
James Morris	"	" 28	922
Robert Stephen Roy Barrow	"	" 28	923
William Henry James	"	" 28	924
Edmond Geraldus O'Connor	"	" 28	925
Frederick Tozer	"	" 28	926
Cecil Palmer	"	" 28	927
William Thomas Buckingham	"	" 28	928
Alfred Sutcliffe Moore	"	" 28	929
George Herbert Bailey	"	" 28	930
James Levi Hickinbottom	"	" 28	931
Alfred Michael Marshall	"	" 28	932
George Sefton Johnston	"	" 28	933
Edward McKee	"	" 28	934
Benjamin Glew	"	" 28	935
William Henry Martyn	"	" 28	936
Hugh O'Kane	"	" 28	937
Alexander McKenzie	"	" 28	938
George Patrick Brunton	"	" 28	939
Thomas William Gilbert	"	" 28	940
William Reid	"	" 28	941
Gilbert William Bailey	"	" 28	942
Peter Campbell	"	" 28	943
Charles Counsel	"	" 28	944
Rudof Hindenach	"	" 28	945
Frederick Henry Collis	"	" 28	946
Thomas Fowler Christie	"	" 28	947
David Graham	"	" 28	448
John Graham	"	" 28	949
John Bell Graham	"	" 28	950
James Hamilton	"	" 28	951
Andrew Young Smellie	"	" 28	952

No. 9.—Return of Traction- and Locomotive-engine Drivers—*continued*.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Thomas Henry Nicholls	Traction and Locomotive, competency	August 28	953
Samuel Andrew Ferguson	Ditto	" 28	954
Richard Johnson Melville	"	" 28	955
Joseph Edward Hills, jun.	"	October 27	956
George Metcalf	"	" 27	957
John Henry Martin	"	" 27	958
James Butler	"	" 27	959
Charles Otway Langham	"	" 27	960
Peter Thomas Johns	"	" 27	961
Adam Blair	"	" 27	962
William Francis Rodgers	"	" 27	963
Thomas Mercer, jun.	"	" 27	964
Peter Guthrie	"	" 27	965
Arthur Louis Davis	"	" 27	966
Henry William Bobin	"	" 27	967
Charles Robert George Charteris	"	" 27	968
Edward James Rowell	"	" 27	969
William Richard Howland	"	" 27	970
Charles Edward Jones	"	December 24	972
Colin Thom Tuck	"	" 24	973
William Wiles	"	" 24	974
Robert Joseph Brown	"	" 24	975
Charles John Brogden	"	" 24	976
Richard Connor	"	" 24	977
George Dunlop	"	" 24	978
Daniel Friel, jun.	"	" 24	979
John Greig	"	" 24	980
Thomas Killworth	"	" 24	981
Thomas Orr	"	" 24	982
Thomas Peter Taylor	"	" 24	983
Michael Tiney	"	" 24	984
David Williams	"	" 24	985
Arthur Richard Wooding	"	" 24	986
James Rodgerson	"	" 24	987
Alexander Hall	"	" 24	988
John James Harris	"	" 24	989
William Walter Knowles	"	" 24	990
Robert Forbes Ledingham	"	" 24	991
Albert Robert Stanton	"	" 24	992
George Carruthers Brown	"	" 24	993
Henry Calverley Cleeve	"	" 24	994
Frederick Cox	"	" 24	995
Edward Duckworth	"	" 24	996
Robert Walter Holland	"	" 24	997
Colin McIntosh	"	" 24	998
Francis Pearce	"	" 24	999
Henry Edward Peryman	"	" 24	1000
Patrick Ruddy	"	" 24	1001
Samuel John Thomson	"	" 24	1002
James Guild Whyte	"	" 24	1003
Ernest Hayman	"	" 24	1004
Gilbert Brown	"	" 24	1005
John Campbell	"	" 24	1006
Charles Collett	"	" 24	1007
Albert Currie	"	" 24	1008
Harry Koppert	"	" 24	1009
James Moffitt	"	" 24	1010
James Goode McIlwrick	"	" 24	1011
Alexander McKerrow	"	" 24	1012
Peter McKay	"	" 24	1013
William Lorimer Scott	"	" 24	1014
Andrew Weir	"	" 24	1015
William John Drake	"	" 24	1016
William John Bell	"	" 24	1017
William Craig	"	" 24	1018

No. 9.—Return of Traction- and Locomotive-engine Drivers—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Anslow Leopold Keith	Traction and Locomotive, comparatively	December 24	1019
Frank Logan	"	" 24	1020
William James Nankivell	"	" 24	1021
William Archibald Smeed	"	" 24	1022
John McDonald	"	" 24	1023
Horace Wylde	"	" 24	1024
John Read	"	" 24	1025
Francis Richard Metherell	"	" 24	1026
Samuel Carr	"	" 24	1027
James Edward Carr	"	" 24	1028
George Robert Charlton	"	" 24	1029
Walter William Massey	"	" 24	1030
John Geddes, jun.	"	" 24	1031
Albert More	"	" 24	1032
		1904.	
Donald Fraser	"	February 23	1033
Richard Baker	"	" 23	1035
Philip Sexton	"	" 23	1037
Robert Cadzow Fisken	"	" 23	1038
William John McCollough Harvey	"	" 23	1039
William Thomas Lavin	"	" 23	1040
Alfred James Whiterod	"	" 23	1041
Samuel Wilson	"	" 23	1042
William Robert Brookland	"	" 23	1043
Albert Henry Dalton	"	" 23	1044
Frederick Finlay	"	" 23	1045
George McIntosh	"	" 23	1046
Charles Edward Riddle	"	" 23	1047
Walter Scott	"	" 23	1048
John Snell	"	" 23	1049
James Winter	"	" 23	1050
David Young Gibson	"	" 23	1051
Richard Lamb	"	" 23	1052
George Mackie	"	" 23	1053
Douglas Wilson	"	" 23	1054
Patrick Joseph Hassett	"	" 23	1055
Robert Crawford	"	" 23	1056
Arthur Edward Spooner, jun.	"	" 23	1057
Charles George Thurston	"	" 23	1058
Matthew Hanley, jun.	"	" 23	1059
John Henry Lawson Cornelius	"	" 23	1060
William Ernest Cox	"	" 23	1061
Henry Curragh	"	" 23	1062
William Edward Giles	"	" 23	1063
George Thomas Greenwood	"	" 23	1064
William Hampton	"	" 23	1065
David Lilley	"	" 23	1066
Charles Frederick Marshall	"	" 23	1067
Thomas Johnston, jun.	"	" 23	1068
Dave McCormack	"	" 23	1069
Donald McKintosh	"	" 23	1070
James Simpson	"	" 23	1071
Francis Thompson	"	" 23	1072
John Costello	"	" 23	1073
Michael Tully	"	" 23	1074
Norman Durham	"	March 29	1075
Edward Martin Edkins	"	" 29	1076
Henry McDonald	"	" 29	1077
Charles Henry Sargisson	"	" 29	1078
Charles Dillon	"	" 29	1079
Charles Robert Hyde	"	" 29	1080

No. 10.—Return of First-class Stationary-engine Drivers to whom Certificates of Service have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Thomas Grounds	First-class stationary, service	May 19	1558
Alexander Young	Ditto...	" 19	1559
John William Bailey	"	" 19	1560
Joseph Cox	"	" 19	1561
George Donald Grieve Armour	"	" 19	1562
John Northey	"	" 19	1563
Joseph O'Connell	"	" 19	1564
William Bentley Mackie	"	August 28	1565
John Highet	"	" 28	1566
Alexander McKenzie	"	October 27	1567
David James O'Donnell	"	" 27	1568
Henry Hunter	"	" 27	1569
William Samson	"	" 27	1570
George Frederick Armstrong	"	December 24	1571
George Blair	"	" 24	1572
William Buchanan	"	" 24	1573
William Short Buchanan	"	" 24	1574
Edward Clarke	"	" 24	1575
John Arthur Denman	"	" 24	1576
John Graham Alexander Donaldson ...	"	" 24	1577
William Harry Earland	"	" 24	1578
Einar Erickson	"	" 24	1579
James Friar	"	" 24	1580
William Gemmell	"	" 24	1581
Andrew Nicolson Jamieson	"	" 24	1582
Walter James Johnson	"	" 24	1583
George Henry Jones	"	" 24	1584
Reuben Kightly	"	" 24	1585
William Linney	"	" 24	1586
William Mollison	"	" 24	1587
Charles Cassels Moutray	"	" 24	1588
Robert Ford Munro	"	" 24	1589
James Murray	"	" 24	1590
Patrick McGrath	"	" 24	1591
William McIntosh	"	" 24	1592
James Carle Nicholson	"	" 24	1593
Henry William Parnell	"	" 24	1594
William Alfred Picard	"	" 24	1595
Henry William Priest	"	" 24	1596
William Matthews Russell	"	" 24	1597
David Robertson	"	" 24	1598
Robert Archibald Strang	"	" 24	1599
Alexander Williamson	"	" 24	1600
Edward Baker	"	" 24	1601
Richard Northey Saunders	"	" 24	1602
Alexander Leitch	"	" 24	1603
George Tasman Dawson	"	" 24	1604
Frederick Henry Allison	"	" 24	1605
John Kelly	"	" 24	1606
Adam Girven	"	" 24	1607
Richard Sydney Barber Clarke	"	" 24	1608
Joseph Thomas Levien	"	" 24	1609
William Stewart	"	" 24	1610
William King	"	" 24	1611
Walter Westby McKelvey	"	" 24	1612
Robert Brisen Johnston	"	" 24	1613
Henry Blanshard King	"	" 24	1614
Leotie Clemesha	"	" 24	1615
Alexander Peebles	"	" 24	1616
Archibald McCarthy	"	" 24	1617
John Herbert Watson	"	" 24	1618
Philip Thomas	"	" 24	1619
		1904.	
Albert Lafranchi	"	February 23	1620

No. 11.—RETURN of SECOND-CLASS STATIONARY-ENGINE DRIVERS to whom CERTIFICATES of SERVICE have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
John Andrew Artha	Second-class stationary, service	December 24 ...	789
John Henry Davis Burnand	Ditto	" 24 ...	790
George Begwood	"	" 24 ...	791
Frank Coulthard	"	" 24 ...	792
James Bartholomew Crowley	"	" 24 ...	793
Oliver Warmington Currin	"	" 24 ...	794
Francis Harold Currin	"	" 24 ...	795
Robert Henry Fogden	"	" 24 ...	796
John Greene	"	" 24 ...	797
John Hamill	"	" 24 ...	798
William Gilbert Lane	"	" 24 ...	799
Samuel Hooker	"	" 24 ...	800
Alfred Westerman Marshall	"	" 24 ...	801
William Marshall	"	" 24 ...	802
William Alexander More	"	" 24 ...	803
Joseph Neale	"	" 24 ...	804
William Palmer	"	" 24 ...	805
William George Stuart	"	" 24 ...	806
Edward Fitzwilliam White	"	" 24 ...	807
Martin Thomas White	"	" 24 ...	808
William White	"	" 24 ...	809
John Griffin, sen.	"	" 24 ...	810
Charles Grace	"	" 24 ...	811
Henry Thomas Andrews	"	" 24 ...	812
George Grant	"	" 24 ...	813
Charles Bushnell	"	" 24 ...	814
Edward John Tresidder	"	" 24 ...	815
Mark Cowley	"	" 24 ...	816
Robert Duncan	"	" 24 ...	817
George Johnson	"	" 24 ...	818
George Egerton	"	" 24 ...	819
Thomas Aiton	"	" 24 ...	820
		1904.	
Walter Whily	"	February 23 ...	821

No. 12.—RETURN of RESTRICTED SECOND-CLASS ENGINE-DRIVERS to whom CERTIFICATES of SERVICE have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
Arthur Charles Atkin	Restricted second class ...	May 19, 1903	•4

No. 13.—RETURN of EXTRA FIRST-CLASS STATIONARY-ENGINE DRIVERS to whom CERTIFICATES of COMPETENCY have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Thomas Alexander Petrie	Extra first-class stationary	August 28 ...	19
Thomas Maynard	"	" 28 ...	20
Albert Edwin Edmonds	"	" 28 ...	21
Thomas Stuart Gurr	"	December 24 ...	22
Alfred James Border	"	" 24 ...	23
James Edmondston Nairn	"	" 24 ...	24
		1904.	
Alfred Suter	"	February 23 ...	25

No. 14.—Return of First-class Stationary-engine Drivers to whom Certificates of Competency have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Robert Marshall Ray	First-class stationary, competency	May 19	310
Thomas James Orchard	Ditto	,, 19	311
John Vickerstaff	,,	,, 19	312
Philip George Bowater	,,	,, 19	313
Alexander Broadfoot	,,	,, 19	314
William Henry Warburton	,,	,, 19	315
John Tyrrell Weekes	,,	,, 19	316
William Joseph Garrett	,,	,, 19	317
Thomas Reese Sneddon	,,	,, 19	318
David Augustine Baker-Gabb	,,	,, 19	319
Benjamin Henry Brown	,,	,, 19	320
Daniel Duncan	,,	,, 19	321
Walter Montgomery	,,	,, 19	322
Peter McOnie	,,	,, 19	323
Gilbert Stonham Short	,,	,, 19	324
Thomas Townsend	,,	,, 19	325
Robert Burns Aitken	,,	,, 19	326
Henry Beaney	,,	,, 19	327
Henry Brennan Kerr	,,	,, 19	328
John Robertson	,,	,, 19	329
James Snell Wilson	,,	,, 19	330
John James Bardsley	,,	,, 19	331
Alexander Young Cook	,,	,, 19	332
Arthur Douglas Stubbs	,,	,, 19	333
Frank Powell Talboys	,,	,, 19	334
Herbert Gladstone Wheatley	,,	,, 19	335
William Wurr	,,	,, 19	336
Charles Robert Hubbard	,,	,, 19	337
Harold Morgan	,,	,, 19	338
George Edwin Arundel	,,	,, 19	339
Thomas James Sherwood	,,	,, 19	340
John Laidlaw Woodward	,,	,, 19	341
Harry Aldridge Robinson	,,	August 28	342
George Grey Andrews	,,	,, 28	343
William Spencer	,,	,, 28	344
Paul Mitchell	,,	,, 28	345
Wilson George Blackwell	,,	,, 28	346
Bernard Walter Graham	,,	,, 28	347
D'arcy Chaytor	,,	,, 28	348
Joseph Butler	,,	,, 28	349
Charles Sydney Forbes	,,	,, 28	350
Robert Scott	,,	,, 28	351
Seymour Beale	,,	,, 28	352
John Gaddis	,,	,, 28	353
James Jackson	,,	,, 28	354
Horatio George Kent	,,	,, 28	355
Thomas McGee	,,	,, 28	356
Albert George Wales	,,	,, 28	357
Ernest James Sales	,,	,, 28	358
William Douglas Warden	,,	,, 28	359
Hugh Ferrywheir Meikle	,,	,, 28	360
James Forster Davidson	,,	,, 28	361
Thomas Falconer	,,	,, 28	362
John Graham	,,	,, 28	363
Angus Neil Matheson	,,	,, 28	364
John Patton	,,	,, 28	365
George Robert Rutledge	,,	,, 28	366
James Edwin Main	,,	,, 28	367
William James Wills	,,	,, 28	368
George McVicker	,,	,, 28	369
William Cummings	,,	,, 28	370
William Dale	,,	,, 28	371
Arthur Lister	,,	,, 28	372
Robert Bennetts	,,	,, 28	373
Alexander George Curry	,,	,, 28	374
William George Pearce	,,	,, 28	375
James Walter Riley	,,	,, 28	376
Ernest William Tattley	,,	,, 28	377

No. 14.—RETURN of FIRST-CLASS STATIONARY-ENGINE DRIVERS—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Thomas George Hight	First-class stationary, competency	August 28	378
George Gill	Ditto	,, 28	379
Harry Thorley	,,	,, 28	380
Albert Edward Landorf	,,	,, 28	381
Adam Yates	,,	,, 28	382
Albert Cecil Lyndon	,,	October 27	383
Charles James	,,	,, 27	384
Stanley Austin	,,	,, 27	385
Victor John Joseph Bice	,,	,, 27	386
Frank Clerkin	,,	,, 27	387
George Lucas Nelson	,,	,, 27	388
Richard Oswell Speed	,,	,, 27	389
Thomas John Tudor Williams	,,	,, 27	390
John Lord Wylde	,,	,, 27	391
John Butler	,,	,, 27	392
William Bell McKenzie	,,	,, 27	393
William Walters McCabe	,,	,, 27	394
Antoni Raphael Bonetti	,,	,, 27	395
George Fitzwilliam Stuart McLean	,,	,, 27	396
Thomas Herbert Barwell	,,	,, 27	397
John Horan	,,	,, 27	398
Melton Syme	,,	,, 27	399
Robert Stephen Roy Barrow	,,	,, 27	400
Albert Frederick Loveday	,,	,, 27	401
John William Thompson	,,	,, 27	402
Richard William Hocking	,,	,, 27	403
George Greenwood	,,	,, 27	404
Alexander Thomson	,,	,, 27	405
Frederick Knight	,,	,, 27	406
Henry Halliday Elliott	,,	,, 27	407
George Bodley	,,	December 24	408
Norman Gowen Bray	,,	,, 24	409
Thomas Augustine Glew	,,	,, 24	410
William Harris	,,	,, 24	411
Peter James Hughes	,,	,, 24	412
Sidney Black Crawford	,,	,, 24	413
Cyril Hordern Macgeorge	,,	,, 24	414
Donald William Macdonald	,,	,, 24	415
John Chisholm McIver	,,	,, 24	416
William McKegg	,,	,, 24	417
George William Skitch	,,	,, 24	418
Alfred Seymour Thomas	,,	,, 24	419
Robert Joseph Todd	,,	,, 24	420
Andrew Ronaldson Cunningham	,,	,, 24	421
Thomas Edmund Whiteside	,,	,, 24	422
James Currie	,,	,, 24	423
William John Oliver Anderson Irwin	,,	,, 24	424
William Carson Patterson	,,	,, 24	425
John Law Smail	,,	,, 24	426
Thomas Stewart Spencer	,,	,, 24	427
John Bruce	,,	,, 24	428
Frederick John Carnie	,,	,, 24	429
William Clampitt	,,	,, 24	430
Leslie Claude Davies	,,	,, 24	431
William Forestell	,,	,, 24	432
James Henry Fuller	,,	,, 24	433
Albert Edward Gulliver	,,	,, 24	434
George Shearer Harvey	,,	,, 24	435
Matthew Jensen	,,	,, 24	436
George Foote McInnes	,,	,, 24	437
William Acey Stephenson	,,	,, 24	438
Frederick James Tattley	,,	,, 24	439
Thomas Maxwell Ford	,,	,, 24	440
John McLean	,,	,, 24	441
James Henry Naylor	,,	,, 24	442
Ole Laresen	,,	,, 24	443
Archibald Clapham	,,	,, 24	444
Robert James Burrell	,,	,, 24	445

No. 14.—Return of First-class Stationary-engine Drivers—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
William Downie	First-class stationary, competency	December 24	446
John Harrison Robson	Ditto	,, 24	447
William Drew	,,	,, 24	448
Isaac Moore	,,	,, 24	449
Thomas Mitchell	,,	,, 24	450
Job Milsom	,,	,, 24	451
William James Butler	,,	,, 24	452
Cameron Abercrombie Pearson	,,	,, 24	453
		1904.	
Ronald Kerr Brown	,,	February 23	454
Edward Jordan	,,	,, 23	455
John William Oram	,,	,, 23	456
Herbert John Buckland	,,	,, 23	457
John Graham Quinn	,,	,, 23	458
Sidney George Baker	,,	,, 23	459
Robert McCulloch	,,	,, 23	460
Augustine Isidor Rockstrow	,,	,, 23	461
Harold Robert Carey	,,	,, 23	462
Charles Herbert John Tolly	,,	,, 23	463
Charles Alexander Jenkins	,,	,, 23	464
Charles William Bowman	,,	,, 23	465
Robert George Huggins	,,	,, 23	466
William Frederick Herbert Lamborn	,,	,, 23	467
Stephen Beer	,,	,, 23	468
Peter Hamilton	,,	,, 23	469
Charles Fletcher Hewitt	,,	,, 23	470
James Henderson Moir	,,	,, 23	471
Arthur Edward Holmes Brown	,,	,, 23	472
Henry Hall	,,	,, 23	473
William Henry Judd	,,	,, 23	474
Joseph Reuben Ross	,,	,, 23	475
Harold Galbraith Somervell	,,	,, 23	476
John Caithness	,,	,, 23	477
Francis Reuben Fenton	,,	,, 23	478
Dennis Wilson Hursthouse	,,	,, 23	479
George Smith Sutton	,,	,, 23	480
Herbert Davidson Taylor	,,	,, 23	481
Robert Boyd Wilson	,,	,, 23	482
Gilbert Huston	,,	,, 23	483
Thomas Brown	,,	,, 23	484
Edward Angelo Broughton	,,	,, 23	485
Edwin Daniel Berry	,,	March 29	486
William Frederick Dengate	,,	,, 29	487
Peter Christian Bak	,,	,, 29	488
Robert Stewart Young	,,	,, 29	489
Frederick Desmond Oats	,,	,, 29	490

No. 15.—Return of Second-class Stationary-engine Drivers to whom Certificates of Competency have been granted from the 1st April, 1903, to the 31st March, 1904.

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Thomas George Trengrove	Second-class stationary, competency	May 19	945
Thomas John Baigent	Ditto	,, 19	946
John Holden	,,	,, 19	947
John Towan Hosking	,,	,, 19	948
Thomas Omond	,,	,, 19	949
Arthur Harry Pearce	,,	,, 19	950
Reginald William Roberts	,,	,, 19	951
William John Tripp	,,	,, 19	952
James McNulty	,,	,, 19	953
Francis Walter Barnes	,,	,, 19	954
Walter Ernest Hedditch	,,	,, 19	955
Henry Tellman Willson	,,	,, 19	956
James Watson Pollock	,,	,, 19	957
Thomas Richardson	,,	,, 19	958

No. 15.—RETURN of SECOND-CLASS STATIONARY-ENGINE DRIVERS—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
William Aitken Johnston	Second-class stationary, competency	May 19	959
Paul Gustav Maximilian Fink	Ditto	,, 19	960
William Tobin Forrest	,,	,, 19	961
John Pacey	,,	,, 19	962
Charles Theyers	,,	,, 19	963
John William Theyers	,,	,, 19	964
Allan Wallace	,,	,, 19	965
Robert Moreton Wood	,,	,, 19	966
Patrick Callaghan	,,	,, 19	967
Thomas Houghnay Noble	,,	,, 19	968
Moses Halord Hanrahan	,,	,, 19	969
William Clifford	,,	,, 19	971
Thomas Cahill	,,	,, 19	972
James Sterne Menzies	,,	,, 19	973
James O'Driscoll	,,	,, 19	974
William Joseph McCormick	,,	,, 19	975
Adam Wilson	,,	,, 19	976
Jonas Hardy	,,	,, 19	977
Ernest John Bridgeman	,,	,, 19	978
William Walter Dick	,,	,, 19	979
Walter Reid	,,	,, 19	980
Edwin George Bartlett	,,	,, 19	981
Alexander James Tawse	,,	,, 19	982
William John Manser	,,	,, 19	983
John Henry Windle	,,	,, 19	984
David Paton	,,	,, 19	985
Charles Edwards	,,	,, 19	986
Niels Peter Nielsen	,,	,, 19	987
James Tennant	,,	,, 19	988
William Richard Howland	,,	,, 19	989
Frederick Charles Bettjemann	,,	,, 19	990
Francis Richard Calnon	,,	,, 19	991
James Begg Cooper	,,	,, 19	992
William Darcy Inwood	,,	,, 19	993
Murdoch McDonald	,,	,, 19	994
Herbert Patten	,,	,, 19	995
James Watt	,,	,, 19	996
Robert Kerr	,,	,, 19	997
Richard Irving Simpson	,,	,, 19	998
Cyril Probyn Berridge	,,	,, 19	999
Albert Burridge	,,	,, 19	1000
Michael William Coventry	,,	,, 19	1001
John Curtin	,,	,, 19	1002
James Dawson	,,	,, 19	1003
Charles Henry Edmund Hope-Johnstone	,,	,, 19	1004
John Edward Leydon	,,	,, 19	1005
John Henry Wilson	,,	,, 19	1006
John Arthur Bedford	,,	,, 19	1007
Charles Nicholas Robert Couch	,,	,, 19	1008
James Fleming	,,	,, 19	1009
Joseph Gyde	,,	,, 19	1010
George Jones	,,	,, 19	1011
George Thurston Koller	,,	,, 19	1012
James Lee	,,	,, 19	1013
Robert Bowman Morgan	,,	,, 19	1014
George Henry Oldham	,,	,, 19	1015
Arthur Pearce	,,	,, 19	1016
Charles Hewitson Mitchell	,,	,, 19	1017
William Robinson Watson	,,	,, 19	1018
William Healy Olsson	,,	,, 19	1019
Edward Johnsen	,,	,, 19	1020
Alfred Irvine, sen.	,,	,, 19	1021
Frederick Bates	,,	,, 19	1022
Alfred Surman Clulee	,,	,, 19	1023
Nicholas Edwards	,,	,, 19	1024
John Hadden Fea	,,	,, 19	1025
William Walter Fisher	,,	,, 19	1026
Thomas Fitzgerald	,,	,, 19	1027

No. 15.—RETURN of SECOND-CLASS STATIONARY-ENGINE DRIVERS—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Joseph Hilford	Second-class stationary, competency	May 19	1028
William Kirkland	Ditto	,, 19	1029
Henry Lovell	,,	,, 19	1030
Anthony Charles Mann	,,	,, 19	1031
Duncan McIntyre	,,	,, 19	1032
Henry Daniel Allott	,,	,, 19	1033
John Blair	,,	,, 19	1034
Arthur John Burns Campbell	,,	,, 19	1035
Albert George Clarke	,,	,, 19	1036
Edward George Dale	,,	,, 19	1037
William Holland	,,	,, 19	1038
David Johnston	,,	,, 19	1039
Robert Mitchell	,,	,, 19	1040
Alexander McLaggan	,,	,, 19	1041
Donald McLeod	,,	,, 19	1042
William Nichol	,,	,, 19	1043
Andrew Perry	,,	,, 19	1044
Thomas Smellie	,,	,, 19	1045
Charles Marshall	,,	,, 19	1046
David Dunn McKenzie	,,	,, 19	1047
Thomas Hogan	,,	,, 19	1048
Edward Ross Campbell	,,	,, 19	1049
Henry Whitlow	,,	,, 19	1050
William Clements	,,	,, 19	1051
John Henry James Waterhouse	,,	August 28	1052
Charles Ewald	,,	,, 28	1053
Wilfred John Allcock	,,	,, 28	1054
Charles Cartwright	,,	,, 28	1055
George William Shemmings	,,	,, 28	1056
James Cook Clark	,,	,, 28	1057
Daniel Alfred Tucker	,,	,, 28	1058
William James Reilly	,,	,, 28	1059
Joseph Hamilton	,,	,, 28	1060
Neil Skjottrup	,,	,, 28	1061
Thomas Hyland	,,	,, 28	1062
Lewis Mathieson	,,	,, 28	1063
Edward Hartwell	,,	,, 28	1064
William McTaggart	,,	,, 28	1065
William Henry Lawrence	,,	,, 28	1066
Leo Cyril Ryan	,,	,, 28	1067
John Millican	,,	,, 28	1068
John Campbell	,,	,, 28	1069
William Arthur Barnett	,,	,, 28	1070
Thomas Bickley	,,	,, 28	1071
Arthur John Ebbett	,,	,, 28	1072
Martin Ambrose Ellis	,,	,, 28	1073
George Hampshire	,,	,, 28	1074
Andrew Miller	,,	,, 28	1075
William Liley	,,	,, 28	1076
Hugh Black	,,	,, 28	1077
Louis Edward Esselback	,,	,, 28	1078
John Rutherford	,,	,, 28	1079
Thomas Gardner Young	,,	,, 28	1080
Harry Lewis	,,	,, 28	1081
John Tait	,,	,, 28	1082
William Bankier	,,	,, 28	1083
Thomas Cook, jun.	,,	,, 28	1084
John Robertson Curle	,,	,, 28	1085
Percy Dillon	,,	,, 28	1086
George Frederick Edwards	,,	,, 28	1087
Frederick Exell	,,	,, 28	1088
Herbert Henry Hart	,,	,, 28	1089
George Troutte Kofold	,,	,, 28	1090
Thomas Lloyd	,,	,, 28	1091
Charles Matheson	,,	,, 28	1092
Martinus Mogensen	,,	,, 28	1093
William Archibald Barrow Turner	,,	,, 28	1094
Ewen Charles Piercy	,,	,, 28	1095

No. 15.—RETURN of SECOND-CLASS STATIONARY-ENGINE DRIVERS—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Lewis Rees	Second-class stationary, competency	August 28	1096
Donald Stewart	Ditto	,, 28	1097
George Robert Symonds	,,	,, 28	1098
Robert Pringle	,,	,, 28	1099
Edward Battersby Toomath	,,	,, 28	1100
Andrew McKenzie	,,	,, 28	1101
James Henry Walker	,,	,, 28	1102
Joseph Wilfred, sen.	,,	,, 28	1103
William Taylor	,,	,, 28	1104
William Ralph Gardner	,,	,, 28	1105
William Richards	,,	,, 28	1106
Walter Excell	,,	,, 28	1107
John Greig	,,	,, 28	1108
Harry Harper	,,	,, 28	1109
James William Lamb	,,	,, 28	1110
Robert John Nichol	,,	,, 28	1111
Herbert Parker	,,	,, 28	1112
Charles August Thomson	,,	,, 28	1113
Vernon Tennyson Tongs	,,	,, 28	1114
William Stewart	,,	,, 28	1115
Joseph Turnbull Moffitt	,,	,, 28	1116
Peter White	,,	,, 28	1117
John Thomas Adams	,,	,, 28	1118
Alexander Cook, jun.	,,	,, 28	1119
Alfred James Hall	,,	,, 28	1120
Robert McAllister	,,	,, 28	1121
William McCulloch	,,	,, 28	1122
William Courtenay Mugford Stentiford	,,	,, 28	1123
Thomas Richard Weir	,,	,, 28	1124
Charles Jonathan Richardson	,,	,, 28	1125
Frederick Burnell	,,	,, 28	1126
Thomas Clarke	,,	,, 28	1127
Robert Morton Gillespie	,,	,, 28	1128
Sidney Haig	,,	,, 28	1129
William George Jackways	,,	,, 28	1130
Alfred Jones	,,	,, 28	1131
Charles Govan Morgan	,,	,, 28	1132
Thomas Paterson	,,	,, 28	1133
John Aubrey Pegler	,,	,, 28	1134
Hans Petersen	,,	,, 28	1135
Thomas Midland Shepherd	,,	,, 28	1136
John Taylor	,,	,, 28	1137
Charles William Wheeler	,,	,, 28	1138
Norman Gowan Bray	,,	,, 28	1139
Matthew Pretty	,,	,, 28	1140
Alexander Frazer Neilson	,,	,, 28	1141
Elof Hansen	,,	,, 28	1142
Andrew Somervell	,,	October 27	1143
Robert James Breingan	,,	,, 27	1144
Martin Neliander Olson	,,	,, 27	1145
George de Manser	,,	,, 27	1146
Ernest Tresham Andrew	,,	,, 27	1147
James Dickson	,,	,, 27	1148
Stephen Anthony Stark	,,	,, 27	1149
Albinus Hunter Scott	,,	,, 27	1150
Walter Samuel Burrows	,,	,, 27	1151
John Cherrie	,,	,, 27	1152
Patrick Ellison	,,	,, 27	1153
Edward Foley	,,	,, 27	1154
James William Dowling Forrest	,,	,, 27	1155
Henry George Gage	,,	,, 27	1156
William Hall	,,	,, 27	1157
Edward John Joy	,,	,, 27	1158
John McGregor	,,	,, 27	1159
Henry Nevill	,,	,, 27	1160
James Edwin Searle	,,	,, 27	1161
Frederick Henry Stratford	,,	,, 27	1162
John Symes	,,	,, 27	1163

No. 15.—Return of Second-class Stationary-engine Drivers—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Alexander Ingram	Second-class stationary, competency ..	October 27	1164
David Graham	Ditto	,, 27	1165
Bernard James Donoghue	,, ...	,, 27	1166
James Trovan	,, ...	,, 27	1167
Thomas McGillicudy	,, ...	,, 27	1168
John Andrews	,, ...	,, 27	1169
Thomas Dunn	,, ...	,, 27	1170
James Bonner	,, ...	,, 27	1171
William Hegan	,, ...	,, 27	1172
Stephen Edgar Algar	,, ...	,, 27	1173
William James Belcher	,, ...	,, 27	1174
Edgar Brewster	,, ...	,, 27	1175
Charles Colley, jun.	,, ...	,, 27	1176
Walter Gilbert	,, ...	,, 27	1177
George William Harding	,, ...	,, 27	1178
James Hill	,, ...	,, 27	1179
Peter Christian Hveisel Petersen	,, ...	,, 27	1180
John Harrison Robson	,, ...	,, 27	1181
James Rothery	,, ...	,, 27	1182
George Whittington	,, ...	,, 27	1183
Thomas Stanley Madge	,, ...	,, 27	1184
Stephen Harry Dabb	,, ...	,, 27	1185
Hugh Francis Carr	,, ...	,, 27	1186
George Gillanders	,, ...	December 24	1187
Duncan McPhee	,, ...	,, 24	1188
Warrington John Gillman	,, ...	,, 24	1189
George Henry Bird	,, ...	,, 24	1190
Thomas Henry Holland	,, ...	,, 24	1191
Alfred Josiah Willey	,, ...	,, 24	1192
Edward Arthur Coley	,, ...	,, 24	1193
Hubert Septimus Anderson	,, ...	,, 24	1194
George Edward Bowmar	,, ...	,, 24	1195
Matthew Charlton	,, ...	,, 24	1196
William Collett	,, ...	,, 24	1197
William Crombie	,, ...	,, 24	1198
James William Elson	,, ...	,, 24	1199
George James Wilson Gibson	,, ...	,, 24	1200
Edmund Thomas Ryan	,, ...	,, 24	1201
James Stuart	,, ...	,, 24	1202
David Templeton Young	,, ...	,, 24	1203
John Stewart	,, ...	,, 24	1204
Charles Thomas Grant	,, ...	,, 24	1205
Arthur Leslie Davidson	,, ...	,, 24	1206
Frank Karon	,, ...	,, 24	1207
Anthony Moran	,, ...	,, 24	1208
James Murray	,, ...	,, 24	1209
William Alfred Ernest Uren	,, ...	,, 24	1210
Alexander Bellaney	,, ...	,, 24	1211
Henry Bloomfield	,, ...	,, 24	1212
William John Burke	,, ...	,, 24	1213
James Cumming	,, ...	,, 24	1214
John Patrick Desmond	,, ...	,, 24	1215
William Cooper Donnelly	,, ...	,, 24	1216
Archibald Hamilton	,, ...	,, 24	1217
Thomas Elijah Hodginkson	,, ...	,, 24	1218
Alexander MacRae	,, ...	,, 24	1219
Thomas McCutcheon	,, ...	,, 24	1220
John McIntyre	,, ...	,, 24	1221
William Nicholson	,, ...	,, 27	1222
Charles James O'Brien	,, ...	,, 24	1223
George Alexander Poynter	,, ...	,, 24	1224
Robert Law Smail	,, ...	,, 24	1225
Frederick John Thurston	,, ...	,, 24	1226
Charles Louis Almers	,, ...	,, 24	1227
George Caisley	,, ...	,, 24	1228
William Frew	,, ...	,, 24	1229
James Saunders Gibbons	,, ...	,, 24	1230
Thomas Edward Higgs	,, ...	,, 24	1231

No. 15.—Return of Second-class Stationary-engine Drivers—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1903.	
Barry Drew Ingall	Second-class stationary, competency ..	December 24	1232
Arthur Marychurch	Ditto	„ 24	1233
John McCarthy	„	„ 24	1234
Harry Kimpton Whitechurch ..	„	„ 24	1235
Albert Edward Willey	„	„ 24	1236
William Anderson	„	„ 24	1237
Arthur Viant Mitchell	„	„ 24	1238
William Bell	„	„ 24	1239
George Herbert Chapman	„	„ 24	1240
Frank Daniel	„	„ 24	1241
Cornelius Deady	„	„ 24	1242
Allan Lawrence Stewart	„	„ 24	1243
George Logan Johnston	„	„ 26	1244
Horace Addyman	„	„ 24	1245
Horace Frederick Tayler	„	„ 24	1246
Humphrey Arnold Prideaux	„	„ 24	1247
George Edward Muncaster Thorburn ..	„	„ 24	1248
William Gerrard	„	„ 24	1249
William Joseph Fox	„	„ 24	1250
Henry Havelock Meredith	„	„ 24	1251
George Sage	„	„ 24	1252
Charles Higgs	„	„ 24	1253
Ernest William Mackerall Murton ..	„	„ 24	1254
Joseph Burton	„	„ 24	1255
Harry Thomas Taylor	„	„ 24	1256
John Duncan	„	„ 24	1257
Oskar Bredehorst	„	„ 24	1258
William Jennings	„	„ 24	1259
		1904.	
Cecil Conrad Nash	„	February 23	1260
Alexander William Taylor	„	„ 23	1261
Joseph Corkhill	„	„ 23	1262
Charles Henry Bartholomew	„	„ 23	1263
Frank Allman Dalton	„	„ 23	1264
Thomas Dent	„	„ 23	1265
Edward George Gosling	„	„ 23	1266
Aaron Griffiths	„	„ 23	1267
Ambrose Broughton O'Rourke	„	„ 23	1268
Francis Charles Roche	„	„ 23	1269
Victor Spiers	„	„ 23	1270
William Oliver Thomas	„	„ 23	1271
Thomas Fraser	„	„ 23	1272
William Barber	„	„ 23	1273
George William Butcher	„	„ 23	1274
Alfred Cheers	„	„ 23	1275
Samuel William Clover	„	„ 23	1276
Albert Dowman	„	„ 23	1277
Frederick Joseph Hooker	„	„ 23	1278
Christopher Hooper	„	„ 23	1279
Cornelius John Willy	„	„ 23	1280
John Peter Mackay	„	„ 23	1281
Henry Edmund Madigan	„	„ 23	1282
James Henry Banks	„	„ 23	1283
Amos Frederick Cheshire	„	„ 23	1284
George William Hunter	„	„ 23	1285
John Jackson	„	„ 23	1286
John Malcolm Craig	„	„ 23	1287
Alfred Allen	„	„ 23	1288
George Lovell	„	„ 23	1289
Charles William McKenzie	„	„ 23	1290
Gavin McVie, jun.	„	„ 23	1291
James McVie	„	„ 23	1292
William McVie	„	„ 23	1293
William Sheehan	„	„ 23	1294
Alexander Templeton	„	„ 23	1295
John Marsh Tizard	„	„ 23	1296
Robert Warnock	„	„ 23	1297
John Alexander	„	„ 23	1298

No. 15.—Return of Second-class Stationary-engine Drivers—*continued.*

Name of Person.	Class of Certificate.	Date of Issue.	No.
		1904.	
William Edward Hawkins	Second-class stationary, competency ..	February 23	1299
Charles Kingsford	,, ...	,, 23	1300
James Law, jun.	,, ...	,, 23	1301
John Maguire	,, ...	,, 23	1302
Harold William Parker	,, ...	,, 23	1303
Wilfred Ralph	,, ...	,, 23	1304
Alfred James Sutton	,, ...	,, 23	1305
Harold Tracy Willis	,, ...	,, 23	1306
James Willott	,, ...	,, 23	1307
William Lake	,, ...	,, 23	1308
Frederick William Henry Ashman	,, ...	,, 23	1309
James Walls Robb	,, ...	,, 23	1310
Thomas Hugh Barclay	,, ...	,, 23	1311
James Thomas Chaney	,, ...	,, 23	1312
Robert Walter Field	,, ...	,, 23	1313
Ole Haukland	,, ...	,, 23	1314
Edward Gilbert Miller	,, ...	,, 23	1315
Jesse Palmer	,, ...	,, 23	1316
John Roche	,, ...	,, 23	1317
Alfred Rouch	,, ...	,, 23	1318
Thomas Stirling	,, ...	,, 23	1319
Alexander McLaren Turnbull	,, ...	,, 23	1320
Alfred Alexander Geddes	,, ...	,, 23	1321
James Currie	,, ...	,, 23	1322
Thomas Aitken	,, ...	,, 23	1323
James Fowler	,, ...	,, 23	1324
John Goodman	,, ...	,, 23	1325
William Rowell	,, ...	,, 23	1326
Arthur David Lloyd	,, ...	,, 23	1327
Joseph John Dearsley	,, ...	,, 23	1328
James Reid	,, ...	,, 23	1329
William Wilson Wood	,, ...	,, 23	1330
Alexander Williamson	,, ...	,, 23	1331
Larry Jones	,, ...	,, 23	1332
John Hartnett	,, ...	,, 23	1333
Edward Ernest Woodly	,, ...	,, 23	1334
Charles Kershaw	,, ...	,, 23	1335
Frederick Stanley King	,, ...	,, 23	1336
Adam Dennison	,, ...	,, 23	1337
James McCloy	,, ...	,, 23	1338
John Kerr	,, ...	,, 23	1339
John Strevens Callingham	,, ...	March 29	1340
Charles Howard Ellison	,, ...	,, 29	1341
Frank Swanwick	,, ...	,, 29	1342
John Babbage	,, ...	,, 29	1343
Edward Bai	,, ...	,, 29	1344
Samuel Smith	,, ...	,, 29	1345
Charles McCabe	,, ...	,, 29	1346
Frank Grayling	,, ...	,, 29	1347
Alfred Burgess Griffiths	,, ...	,, 29	1348
John Christoffersen	,, ...	,, 29	1349
Thomas Joseph Macnamara	,, ...	,, 29	1350
William George Walker	,, ...	,, 29	1351
Robert Wellesley	,, ...	,, 29	1352
William Benjamin Taylor	,, ...	,, 29	1353
George Glen Watts	,, ...	,, 29	1354

No. 16.—RETURN of ENGINEERS who were examined for CERTIFICATES of COMPETENCY during the Year ended the 31st March, 1904.

Name of Person.	Rank.	Class for which examined
James Blackwood	First-class engineer	Foreign trade.
John Wilson Brown	,,	,,
James Glover	,,	,,
Henry Augustus Levestam	,,	,,
James Meikle	,,	,,
John Eugene McGee	,,	,,
Harry McGregor	,,	,,
John David Plimmer	,,	,,
Alexander Robertson	,,	,,
William Henry Robinson	,,	,,
John Ross	,,	,,
Alfred Sadler	,,	,,
John Jabez Hay Wishart	,,	,,
William Wright	,,	,,
Andrew Crawford Baird	Second-class engineer	,,
Theodore Delabere Barker	,,	,,
John Augustus Samuel Brown	,,	,,
Henry Livingstone Chandler	,,	,,
Herbert Samuel Derbidge	,,	,,
Kenneth Murdo Finlayson	,,	,,
Allan Hugh Hunter	,,	,,
John Heath Johnston	,,	,,
Donald McDonald	,,	,,
Alexander McKenzie	,,	,,
Henry George Noy	,,	,,
James Richardson	,,	,,
George Ross	,,	,,
George John Stitt	,,	,,
Herbert Adair	Third-class engineer	,,
Robert Burns Aitken	,,	,,
George Edwin Arundel	,,	,,
Ernest Alfred Binns	,,	,,
David Augustus Baker-Gabb	,,	,,
Ronald Kerr Brown	,,	,,
Walter Lees Brown	,,	,,
Wilson George Blackwell	,,	,,
Robert Stephen Roy Barrow	,,	,,
John Bruce	,,	,,
Norman Gowen Bray	,,	,,
Arthur Richard Brunsden	,,	,,
Claude Barltrop	,,	,,
Edmund Barry	,,	,,
William Butler	,,	,,
Fred Mather Binney	,,	,,
Archibald Maltby Broadbent	,,	,,
Norman Christie	,,	,,
Ernest Walter Colquhoun	,,	,,
Harry Arthur Curtis	,,	,,
Sidney Black Crawford	,,	,,
Gerald Turner Canton	,,	,,
James Davidson	,,	,,
Frederick William Davidson	,,	,,
Joseph Davies	,,	,,
William Dale	,,	,,
John Reid Dennison	,,	,,
Robert Watson Elliott	,,	,,
Herbert George Grant	,,	,,
William Harold Gittos	,,	,,
Thomas Augustus Glew	,,	,,
George Guild	,,	,,
William Reynolds Hayne	,,	,,
William Sydney Hall	,,	,,
James Hutton	,,	,,
Hugh Hutchison	,,	,,
William John Hanwell	,,	,,
Walter Hughes Judd	,,	,,
Michael Jordan	,,	,,
Charles Alexander Jenkins	,,	,,
John James Kettle	,,	,,

No. 16.—RETURN of ENGINEERS who were examined for CERTIFICATES of COMPETENCY—*contd.*

Name of Person.	Rank.	Class for which examined
Charles Roland Luke	Third-class engineer	Foreign trade.
John Marshall	,,	,,
Donald McLeod Munn	,,	,,
Thomas Magill	,,	,,
Noel Barnett Moss	,,	,,
George Moodie	,,	,,
Andrew Ferguson Mackay	,,	,,
John McCaldon	,,	,,
Angus McCallum	,,	,,
George Alexander McGregor	,,	,,
Charles James McPherson	,,	,,
Charles James McLean	,,	,,
Ernest Edward Owen	,,	,,
John William Oram	,,	,,
Alexander Neil	,,	,,
John Osmond Richter	,,	,,
George Robert Rutledge	,,	,,
Norman Morris Russell	,,	,,
Harold Galbraith Somervill	,,	,,
Melton Syme	,,	,,
Frank Powell Talboys	,,	,,
George William Twigden	,,	,,
Charles Norman Taylor	,,	,,
Richard John Turnbull	,,	,,
James Snell Wilson	,,	,,
Peter Will	,,	,,
Alexander Swanson Waters	,,	,,
John Young	,,	,,
Charles Adams	River engineer	River trade.
William Samuel Adams	,,	,,
William Stuart Adams	,,	,,
Henry Herbert Alexander	,,	,,
Richard Blome	,,	,,
Michael Cain	,,	,,
David Chalmers	,,	,,
John Dunbar	,,	,,
Thomas James Evans	,,	,,
William Forrestell	,,	,,
Joseph Francis	,,	,,
Herbert Henry Hart	,,	,,
Edward Hunter	,,	,,
Joseph Roger Hynes	,,	,,
Henry Brennan Kerr	,,	,,
Albert Campbell King	,,	,,
Walter Henry Charles Langdon	,,	,,
Neil Oliver Manning	,,	,,
Charles Hewitson Mitchell	,,	,,
Duncan McKenzie	,,	,,
Alfred Andrew Perano	,,	,,
Augustino Perano	,,	,,
Charles Arthur Perry	,,	,,
John Mollison Stewart	,,	,,
John Joseph Springgay	,,	,,
Richard Northey Saunders	,,	,,
Charles James Stewart	,,	,,
David William Smith	,,	,,
Hayes Henry Tizard	,,	,,
Charles Edward Vercoe	,,	,,
George Isaac Allen	Marine-engine driver	,,
John Joseph Dromgool	,,	,,
Harry Marvyn Frost	,,	,,
Egerton Green	,,	,,
Francis George Laurie	,,	,,
John William Mardon	,,	,,
Stewart Murphy	,,	,,
George Foote McInnes	,,	,,
John Francis Passell	,,	,,
Alfred James Sutton	,,	,,
Joseph William Tarry	,,	,,
Franklin Harry Walker	,,	,,
Aritaki Wi Hapi	,,	,,

No. 16.—RETURN of ENGINEERS who were examined for CERTIFICATES of COMPETENCY—*contd.*

Name of Person.	Rank.	Class for which examined
Richard Thomas Webb	Marine-engine driver ..	River trade.
Alfred James Border	First-class engineer (powered vessels other than steam)	Sea-going.
Joseph Burns	Second-class engineer (powered vessels other than steam)	,,
Alfred Heber Chadwick	Ditto	,,
Bertie Lionel Cox	,, ...	,,
Amos McKegg	,, ...	,,
Harry Andrew Meyenberg	,, ...	,,
James Mitchell	,, ...	,,
Owen Tudor McLeod	,, ...	,,
Robert Read	,, ...	,,
William Henry Walker	,, ...	,,
Joseph Alexander Barrett	Engineer (powered vessels other than steam) ..	River trade.
Mayo Carlton Clark	Ditto	,,
Stephen Henry Dabb	,, ...	,,
Leslie Claud Davies	,, ...	,,
Alfred Owen Grundy	,, ...	,,
Augustus Stevens Hicks	,, ...	,,
John Arthur Harwood McLeod	,, ...	,,
Owen Tudor McLeod	,, ...	,,
John O'Connor	,, ...	,,
James William Robb	,, ...	,,
Andrew Hampton Russell	,, ...	,,
Robert Russell	,, ...	,,
Henry Robert Turner	,, ...	,,
Thomas Whall	,, ...	,,

Total number of applicants, 171. Amount of fees, £171.

Failures to pass examination: 1 first-class engineer, 2 second-class engineers, 7 third-class engineers, 7 river engineers, 1 engineer powered vessels other than steam, river trade.

No. 17.—Return of Steamers and Oil-engine Vessels surveyed during the Financial Year ended 31st March, 1904, with Particulars of Tonnage, &c.

Name of Vessel.	Tons Measurement. Gross.	Register.	Nominal Horse-power of all Steamships and Brake Horse-power of Ships other than Steam.	Indicated Horse-power of Home-trade Steamers and of Foreign Steamers only.	Description of Machinery.	Screw.	Paddle.
Admiral	121	82	28	..	Compound S. condensing	Single..	..
Advance	..	..	8	..	High pressure	" ..	..
Ahuriri	85	31	17	..	Compound S. condensing	" ..	..
Aida..	2	1	1·5	5·6	"	" ..	..
Akaroa (2) ..	76	43	28	144	"	" ..	..
Akitio	16	12	20 B.H.P.	..	Oil-engine	" ..	..
Albany	..	..	8	10	High pressure	" ..	..
Alert (Thames) ..	..	..	6	..	Condensing	" ..	..
Anna	28	21	10 B.H.P.	..	Oil-engine	" ..	..
Antrim	60	35	17	..	Condensing	" ..	..
Aorere	72	49	16½	66·8	Compound S. condensing	" ..	..
Aotea (Auckland) ..	111	89	15 B.H.P.	..	Oil-engine	" ..	..
Aotea (Kaipara) ..	263	157	33	..	Compound S. condensing	" ..	..
Aparima (2)	5,704	3,684	284	2,702	Triple compound ..	Twin ..	..
Atapo	5	3	⅔	4½	High-pressure condensing	Single..	..
Awarua (Blenheim) ..	..	..	3	..	High pressure	" ..	..
Awarua (Auckland) ..	159	100	32	207	Condensing	" ..	..
Beatrice	..	8	10	..	Compound S. condensing	" ..	..
Bella	19	12	12	..	High pressure	" ..	..
Ben Lomond ..	46	33	15	..	Compound S. condensing	" ..	..
Birkenhead	87	55	20	..	High pressure	..	Paddle.
Blanche (Auckland) ..	26	17	9	..	"	Single..	..
Britannia (2) ..	196	108	40	..	"	" ..	..
Canterbury	..	..	24	..	"	Twin ..	..
Charles Edward ..	245	145	48	213	Compound S. condensing	Single..	..
Chelmsford	103	70	24	61	"	" ..	..
Clansman	591	336	90	527	"	" ..	..
Clara (2)	..	..	2½	..	High pressure	" ..	..
Claymore	210	91	54	400	Triple expansion ..	" ..	..
Clematis	..	5	8	..	Compound S. condensing	" ..	..
Clyde	130	..	40	..	"	..	Stern wheel.
Comet	..	..	2½	..	High pressure	Single..	..
Condor	174	122	24	..	Compound S. condensing	" ..	..
Corinna	1,279	820	141	898	"	" ..	..
Coromandel	99	67	25	..	"	" ..	..
Countess	189	84	28	..	"	" ..	..
Countess of Ranfurly ..	198	153	90 B.H.P.	..	Oil-engine	" ..	..
Cygnet	124	66	43	170	Compound S. condensing	" ..	..
Daphne (Hokitika) ..	..	..	¾	..	High pressure	" ..	..
Dingadee	640	393	80	439	Compound S. condensing	Twin ..	..
Dolly Varden ..	31	23	30 B.H.P.	..	Oil-engine	Single..	..
Dot (Auckland) ..	..	..	½	..	High pressure	" ..	..
Doto	28	19	13	52	Compound S. condensing	" ..	..
Dredge No. 121 ..	657	394	100	488	"	Twin ..	..
Dredge No. 222 (2) ..	1,225	500	465	550	"	" ..	..
Duchess	308	62	81	..	Triple expansion ..	Single..	..
Duco	130	26	60	..	" ..	" ..	..
Duke (2)	6	5	6	8	Low pressure	..	Stern wheel.
Durham	99	53	24	..	Compound S. condensing	Single..	..
Eagle	219	138	70	..	"	..	Paddle.
Edina	..	4	6	..	High pressure	Single..	..
Eliza	..	..	3	..	"	" ..	..
Elsie	20	15	10	..	"	" ..	..
Elsie Evans	7	5	20 B.H.P.	..	Oil-engine	" ..	..
Endon (2)	..	..	5	..	Compound S. condensing	" ..	..
Energy	58	15	16	..	"	" ..	..
Enterprise	18	13	5 B.H.P.	..	Oil-engine	" ..	..
Erin	..	..	4	..	High pressure	" ..	..
Erskine (2)	126	98	35	120	Compound S. condensing	" ..	..
Ethel, J.	29	19	16	90	Compound	" ..	..
Express	53	36	25	100	Compound S. condensing	" ..	..
Fairy (Napier) ..	45	32	15	50	High pressure	" ..	..
Falcon	..	..	6	12	"	" ..	..
Fanny	90	55	30	160	Compound S. condensing	" ..	..
Fingal	34	22	9½	48	"	" ..	..
Firefloat (2)	41	31	13	25	High pressure	" ..	..
Firefly	9	7	8 B.H.P.	..	Oil-engine	" ..	..
Flirt	17	13	10 B.H.P.	..	"	" ..	..
Gannet (2)	10	..	12	..	High pressure	" ..	..
Gertie	262	100	59	413	Triple expansion ..	Twin ..	..
Glenelg	288	156	75	331	Compound S. condensing	Single..	..
Goldfinch	..	..	10	..	"	" ..	..
Gordon	11	9	12	..	"	" ..	..
Gosford	83	56	30	..	Compound	" ..	..
Gretchen	..	..	1½	..	High pressure	" ..	..
Greyhound	107	83	50 B.H.P.	..	Oil-engine	" ..	..
Hamurana (2) ..	31	24	3	10	High pressure	" ..	..

Note.—The figure (2) after the name of a vessel shows vessel to have been twice surveyed.

No. 17.—RETURN of STEAMERS and OIL-ENGINE VESSELS SURVEYED, &c.—*continued.*

Name of Vessel.	Tons Measurement. Gross.	Tons Measurement. Register.	Nominal Horse-power of all Steamships and Brake Horse-power of Ships other than Steam.	Indicated Horse-power of Home-trade Steamers and of Foreign Steamers only.	Description of Machinery.	Screw.	Paddle.
Haupiri	700	475	88	527	Compound S. condensing	Single	
Hauroto	1,998	1,276	253	1,242	"	"	
Hawea	1,757	1,114	104	857	Triple expansion	"	
Heathcote (2)	167	94	35	..	Compound S. condensing	"	
Herald	573	370	85	459	"	"	
Himitangi	323	149	45	248	Triple expansion	"	
Hinemoa (Auckland) (2)	10	8	6½	20	High pressure	"	
Hirere (2)	48	36	16	64	Compound S. condensing	Twin	
Huia (Auckland) (2)	204	196	6 B.H.P.	..	Oil-engine	Single	
Huia (Wellington)	133	69	23	160	Compound S. condensing	"	
Huria	..	..	10 B.H.P.	..	Oil-engine	"	
Ida	18	12	10	..	High pressure	"	
Invercargill	223	123	50	..	Compound S. condensing	"	
Ithaca (2)	..	7	9	..	"	"	
Jane Douglas	95	74	22	70	"	"	
Janet Nicoll	780	496	90	471	"	"	
Janie Seddon	109	42	..	360	Surface condensing	Twin	
J.D.O.	129	88	28	..	Compound S. condensing	Single	
John Anderson	52	36	20	..	"	"	
John Townley	..	85	40	180	"	Twin	
Kahu	175	99	40	212	"	Single	
Kaipara	..	..	4	..	"	"	
Kanieri	202	115	20	160	"	"	
Kapanui	110	75	32	..	"	"	
Kapiti	208	80	35	239	"	"	
Kapui	58	30	30	..	High pressure	"	
Kate	..	..	5	..	"	"	
Katikati	37	26	9	..	Compound S. condensing	"	
Kawatiri (2)	..	..	2½	6	Non-condensing	"	
Kawau (2)	99	53	20	..	Compound S. condensing	"	
Kennedy	188	124	43	216	"	Twin	
Kia Ora	299	156	65	450	"	"	
Kilmorey	..	..	1½	..	High pressure	Single	
Kini	1,122	702	130	680	Triple expansion	"	
Kiripaka	105	75	24	100	Compound S. condensing	"	
Kittawa	1,246	707	120	697	"	"	
Kiwi	..	..	3	..	High pressure	"	
Koonya	1,090	662	115	730	Triple-ex. S. condensing	"	
Kopu	..	18	13	..	High pressure	..	Paddle.
Kopuru	40	27	20	60	Non-condensing	Single	
Koputai	153	5	120	441	Compound S. condensing	"	
Kotiti	58	42	14	..	"	"	
Kotuku (2)	1,054	662	112	613	Triple expansion	"	
Kuaka	45	33	90 B.H.P.	..	Oil-engine	"	
Lady Barkly	55	39	20	90	Compound S. condensing	"	
Lena (2)	..	..	5	..	High pressure	"	
Lily	..	..	1¼	..	"	"	
Little George	..	4	4	..	"	"	
Little Jack	..	..	1½	..	"	"	
Louie	19	9	7	..	"	"	
Loyalty (2)	95	68	35	175	Compound S. condensing	"	
Lyttelton (tug)	190	39	80	..	"	..	Paddle.
Mahinapua (Hokitika) (2)	10	7	6	..	High pressure	..	Stern wheel.
Mahuta	15	11	13 B.H.P.	..	Oil-engine	Single	
Makarora	..	45	13	..	High pressure	"	
Mana (Wellington)	99	77	25	141	Compound S. condensing	"	
Mana (Westport) (2)	196	50	90	490	"	"	
Manakau	65	45	20	80	"	"	
Manapouri	2,060	1,288	220	1,600	"	"	
Manaroa	122	77	24	178	"	"	
Manchester	..	366	160	..	"	"	
Mangaiti	..	..	6	..	High pressure	"	
Mangapapa	146	78	28	193	Vertical compound	"	
Manuwai	107	75	25	..	High pressure	..	Stern wheel.
Mapourika (2)	1,208	718	130	1,247	Triple expansion	Single	
Mararoa	2,598	1,380	530	3,537	"	"	
Matuku	..	..	4	..	High pressure	"	
May	..	..	3	..	"	"	
Meremere (2)	..	..	1½	..	Compound S. condensing	"	
Minnie Casey	74	48	20	..	"	"	
Moa	188	95	33	153	"	"	
Moerangi	15	14	27½ B.H.P.	..	Oil-engine	"	
Mokau	162	98	27	160	Compound S. condensing	"	
Mokoia	3,502	2,154	255	3,501	Triple expansion	"	
Moss Rose	..	..	6	..	High pressure	"	
Motara	..	..	4	..	Non-condensing	"	
Moturoa	..	..	10	..	"	"	
Mountaineer	109	66	50	..	Compound S. condensing	..	Paddle.

NOTE.—The figure (2) after the name of a vessel shows vessel to have been twice surveyed.

No. 17.—Return of Steamers and Oil-engine Vessels surveyed, &c.—*continued.*

Name of Vessel.	Tons Measurement. Gross.	Tons Measurement. Register.	Nominal Horse-power of all Steamships and Brake Horse-power of Ships other than Steam.	Indicated Horse-power of Home-trade Steamers and of Foreign Steamers only.	Description of Machinery.	Screw.	Paddle.
Moura	2,026	1,247	275	1,925	Triple expansion ..	Twin ..	..
Muritai	224	133	45	210	Compound S. condensing	Single..	..
Muritai (Horeke) ..	..	..	8	..	High pressure	" ..	..
Nambucca	130	74	24	120	Compound S. condensing	" ..	..
Napier	70	48	30	62	"	" ..	..
Narcissus	..	..	2	..	High pressure	" ..	..
Naumai	47	28	12	30	Compound S. condensing	" ..	..
Nautilus	41	29	18	65	"	" ..	..
Nene	6	4	2	..	Compound	" ..	..
Ngapuhi	691	299	160	1,340	Triple expansion ..	Twin ..	..
Ngunguru	80	54	17	69	Compound S. condensing	Single..	..
Nina	..	..	2	..	Compound	" ..	..
Ohinemuri	114	73	26	130	Compound S. condensing	Twin ..	..
Ohuru	..	20	14	..	Quadruple expansion ..	" ..	..
Omapere	601	352	80	505	Compound S. condensing	Single..	..
Ongarue	..	..	16 B.H.P.	..	Oil-engine	" ..	..
Onslow	23	16	14	..	Compound S. condensing	Twin ..	..
Opawa	110	64	18	73	"	Single..	..
Oreti	219	117	50	162	"	" ..	..
Orewa	59	37	17	..	"	" ..	..
Osprey	219	138	70	..	"	..	Paddle.
Ovalau	1,299	766	103	673	Quadruple expansion ..	Single..	..
Paeroa	91	46	15	67	Compound S. condensing	" ..	..
Pareora	650	355	71	428	Triple expansion ..	" ..	..
Pearl	14	9	6	..	High pressure	" ..	..
Pelorus (2)	25	18	12	..	"	" ..	..
Penguin	836	517	180	711	Compound S. condensing	" ..	..
Petone	708	388	82	544	Triple expansion ..	" ..	..
Phantom	44	18	11	140	Compound S. condensing	" ..	..
Phœnix (2)	8	6	5	..	High pressure	" ..	..
Piako (2)	..	..	..	..	Compound	" ..	..
Pilot (Auckland) (2) ..	30	10	13	65	"	" ..	..
Pilot (Wellington) ..	39	26	15	..	Triple expansion ..	" ..	..
Piraki (2)	..	10	4	..	High pressure	" ..	..
Planet	23	13	8	..	"	" ..	..
Plucky	81	29	40	262	Compound S. condensing	" ..	..
Poherua	1,174	749	128	686	Triple expansion ..	" ..	..
Presto	..	..	3	..	High pressure	" ..	..
Progress	..	200	50	144	Compound S. condensing	" ..	..
Pukaki	1,444	917	110	622	Quadruple expansion ..	" ..	..
Purau	51	38	18	..	Compound S. condensing	Twin ..	..
Queen of the South ..	197	121	40	220	"	Single..	..
Rakanoa (2).. ..	2,246	1,393	200	843	Triple expansion ..	" ..	..
Rarawa	1,071	450	140	1,106	Surface condensing ..	Twin ..	..
Result (Napier) ..	28	18	10	..	Compound S. condensing	Single..	..
Result (Tauranga) ..	..	..	4	..	High pressure	" ..	..
Rimu	358	144	95	398	Triple expansion ..	Twin ..	..
Rita	40	22	11	55	Compound S. condensing	Single..	..
Rob Roy	95	34	16	..	"	" ..	..
Rosamond	721	462	90	411	"	" ..	..
Rose	..	..	2	..	High pressure	" ..	..
Rose Casey	132	99	35	..	"	" ..	..
Rotoiti (2)	1,159	630	104	1,127	Triple expansion ..	Twin ..	..
Rotoiti (launch) ..	..	..	2½	..	" ..	Single..	..
Rotokino	2,004	1,263	135	929	Quadruple expansion ..	" ..	..
Rotomahana (Auckland)	183	139	50	265	Compound S. condensing	" ..	..
Rotomahana (Dunedin)	1,763	915	450	2,465	"	" ..	..
Rotorua	926	576	176	953	Compound S. condensing	" ..	..
Rubi Seddon ..	528	348	60	746	Surface condensing ..	Twin ..	..
Ruru	31	11	10	..	Compound	Single..	..
Savaii	55	31	16	..	Compound S. condensing	" ..	..
Scout	14	10	10 B.H.P.	..	Oil-engine	" ..	..
Sonoma	..	..	13	..	High pressure	" ..	..
Southern Cross ..	682	403	117	590	Triple expansion ..	" ..	..
Stella	268	157	90	183	Compound S. condensing	" ..	..
Stirling	97	26	39	238	"	" ..	..
Stormbird	217	137	40	226	"	" ..	..
Sumner (2)	167	94	35	..	"	" ..	..
Sylph	..	5	8	..	High pressure	" ..	..
Taieri	1,668	1,071	155	742	Triple expansion ..	" ..	..
Tainui	80	46	20	..	High pressure	..	Paddle.
Tainui (Auckland) ..	128	86	24	134	Compound S. condensing	Single..	..
Takapuna (Auckland)..	77	57	25	..	High pressure	..	Paddle.
Takapuna (Dunedin)..	930	472	265	1,221	Compound S. condensing	Single..	..
Talune	2,000	1,370	255	1,842	Triple expansion ..	" ..	..
Tangaroa	189	109	70	..	Compound S. condensing	Twin ..	..
Tangihua	31	20	15	90	"	Single..	..
Taniwha (Auckland) ..	263	191	40	254	"	Twin ..	..

Note.—The figure (2) after the name of a vessel shows the vessel to have been twice surveyed.

No. 17.—RETURN of STEAMERS and OIL-ENGINE VESSELS SURVEYED, &c.—*continued.*

Name of Vessel.	Tons Measurement. Gross.	Tons Measurement. Register.	Nominal Horse-power of all Steamships and Brake Horse-power of Ships other than Steam.	Indicated Horse-power of Home-trade Steamers and of Foreign Steamers only.	Description of Machinery.	Screw.	Paddle.
Taniwha (Timaru) ..	..	16	16	..	High pressure	Single..	..
Tarakihi	..	..	4	..	"	" ..	..
Tarawera	2,003	1,268	250	1,543	Compound S. condensing	" ..	..
Tarewai	10	7	6	..	High pressure	" ..	..
Taviuni	1,465	510	135	1,025	Quadruple expansion ..	" ..	..
Tawera (Lake Te Anau)	..	..	14	..	Compound S. condensing	" ..	..
Tawera (Gisborne) ..	52	44	40 B.H.P.	..	Oil-engine	" ..	..
Tawera (Waikato ..	..	..	8	..	High pressure	" ..	..
Te Anau	1,652	1,028	250	1,249	Compound S. condensing	" ..	..
Te Kapu (2).. ..	92	50	25	113	"	" ..	..
Terranora	349	199	94	232	"	..	Paddle.
Theresa Ward (2) ..	195	9	95	399	Triple expansion ..	Single..	..
Thistle	96	77	90 B.H.P.	..	Oil-engine	" ..	..
Thomas King ..	98	70	16	..	High pressure	" ..	..
Timaru	479	211	78	324	Compound S. condensing	Twin ..	..
Titiroa	..	..	3	..	High pressure	Single..	..
Tongariro (2) ..	..	..	8	..	"	" ..	..
Toroa	388	174	91	482	Triple expansion ..	" ..	..
Tuariki	..	..	8 B.H.P.	..	Oil-engine	Twin ..	..
Tu Atu	40	30	48 B.H.P.	..	"	" ..	..
Tui (2)	..	..	6½	..	High pressure	Single..	..
Tuna (Gisborne) ..	..	..	14	..	Compound S. condensing	Twin ..	..
Tutanekai (C.G.S.) ..	811	412	205	1,145	Triple expansion ..	" ..	..
Upolu	1,140	692	120	733	Quadruple expansion ..	Single..	..
Variance	25	18	5 B.H.P.	2½	Oil-engine	" ..	..
Victoria	147	92	40	200	Compound S. condensing	..	Paddle.
Victory	..	..	4	..	Non-condensing ..	Single..	..
Vivid	21	6	13	..	High pressure	" ..	..
Waahi	..	..	5	..	Oil engine	" ..	..
Waiapu	..	61	15	..	"	" ..	..
Waihi	92	63	20	172	Compound S. condensing	" ..	..
Waikare	3,071	1,901	229	2,352	Triple expansion ..	" ..	..
Waimana	151	107	18	100	Quadruple expansion ..	Twin ..	..
Waimarie (Auckland)(2)	245	159	48	206	Compound S. condensing	" ..	..
Waimarie (Wanganui)	76	57	26	..	High pressure	..	Paddle.
Wainui	661	411	95	626	Compound S. condensing	Single..	..
Waione	57½	43	40	..	Triple expansion ..	Twin ..	..
Waiotahi	278	167	56	399	Compound S. condensing	" ..	..
Waipori	1,919	1,229	180	862	Triple expansion ..	Single..	..
Wairere (Wanganui) ..	..	27	80	..	High pressure	..	Paddle.
Wairoa (Auckland) ..	99	63	24	240	Compound S. condensing	Single..	..
Wairoa (Nelson) ..	70	47	20	50	"	" ..	..
Waitangi (Auckland) (2)	171	34	62	368	"	Twin ..	..
Waitoa	38	27	16	32	High pressure	" ..	..
Waitohi (2)	24	18	10	70	Compound S. condensing	Single..	..
Waiwera (Dunedin) ..	..	..	7	..	High pressure	" ..	..
Waiwera (Lyttelton) ..	..	..	8	..	Compound S. condensing	" ..	..
Waiwiri	..	..	7¾	..	"	" ..	..
Wakatere	441	157	140	698	"	..	Paddle.
Wakatu	157	95	23	156	"	Single..	..
Wanaka	2,421	1,572	280	1,241	Triple expansion ..	" ..	..
Warrimoo	3,529	2,076	490	3,701	" ..	" ..	..
Wasp	..	..	1	..	High pressure	" ..	..
Waverley	156	93	25	108	Compound S. condensing	Twin ..	..
Weka (Auckland) ..	127	86	27	108	"	" ..	..
Wellington (Auckland)	382	279	80	514	"	Single..	..
Westland	133	35	60	297	"	..	Paddle.
Whakapara	..	..	2¼	..	"	Single..	..
Whakariri	819	449	..	575	Surface condensing ..	Twin ..	..
Whangape	2,931	1,900	280	1,052	Triple expansion ..	Single..	..
Winona	..	19	8	..	Compound S. condensing	" ..	..
Young Bungaree ..	69	47	35	130	Surface condensing ..	" ..	..
Zephyr	..	8	14	..	High pressure	" ..	..

NOTE.— e figure (2) after the name of a vessel shows vessel to have been twice surveyed.

No. 18.—Return of Sailing-vessels surveyed during the Financia Year ended the 31st March, 1904, with Particulars of Tonnage, &c.

Name of Vessel.	Tons Measurement.		Description.	Times surveyed.
	Gross.	Register.		
Defiance	208	199	Barquentine ..	1
Empreza	249	236	Barque	2
Frank Guy	195	191	„	1
Helen Denny	694	742	„	1
Laira	492	458	„	1
Northern Chief	287	263	„	1
Onyx	427	396	„	1
Pendle Hill	234	222	Barquentine ..	1
St. Kilda	200	189	Schooner	1
Silver Cloud..	303	292	Barquentine ..	1

No. 19.—Return of Vessels surveyed for Seaworthiness, &c., from the 1st April, 1903, to the 31st March, 1904.

Dates of Survey.	Name of Vessel.	Where surveyed.	Nature of Casualty, &c.
1903.			
June 16 ..	Rapallo	Wellington	Grounded in Wellington harbour.
June 26 ..	Westralia	Auckland	Propeller-blade lost.
July 10 ..	Rimutaka	Wellington	Main steam-pipe tested after repair.
July 25 ..	Talune	Auckland	Several of vessel's boats lost between Sydney and Auckland.
Aug. 1 ..	Concordia	Auckland	Survey of equipments and life-saving apparatus.
Aug. 12 ..	Takapuna	Wellington	Grounded at New Plymouth.
Aug. 15 ..	Taviuni	Auckland	Bearing of rocking-shaft carried away.
Aug. 15 ..	Isleworth	Timaru	Ballast-tank leaking.
Sept. 15 ..	Star of the East ..	Wellington	Survey of boat and equipments.
Nov. 3 ..	Weka	Auckland	Grounded at the mouth of the Waiuku River.
Nov. 4 ..	Niwaru	Auckland	Vessel struck a rock entering Napier Harbour.
Nov. 16 ..	Kia Ora	Auckland	Survey of passenger accommodation.
Nov. 30 ..	Monowai	Dunedin	Propeller-blade lost.
Dec. 7 to Jan. 25	Rubi Seddon	Wellington	Grounded in Red Sea.
Dec. 21 ..	Marere	Auckland	Grounded in Auckland Harbour.
1904.			
Jan. 12 ..	Kotuku	Wellington	Repairs to stern tube and shaft.
Jan. 29 ..	Mapourika	Wellington	Grounded in Nelson Harbour.
Feb. 2 ..	Kolya	Wellington	Survey of boats.
Feb. 4 ..	Lutterworth	Wellington	Grounded in Nelson Harbour.
Mar. 24 ..	St. Kilda	Auckland	Small hole knocked in plating in bows.
Mar. 26 ..	Emma Sims	Lyttelton	Survey of life-saving appliances.
Mar. 29 ..	Devon	Wellington	Repairs to main steam-pipe.

No. 20.—Return showing the Revenue received from the Inspection of Machinery Department (including the Examination of Engineers and Engine-drivers, and the Amount earned by the Survey of Steamers) during the Financial Year ended the 31st March, 1904.

	£	s.	d.
Received for inspection of boilers and machinery	6,270	7	6
Received for certificates for land-engine drivers	560	19	0
Recovered law costs	6	16	10
Fees for survey of steamers (including auxiliary powered vessels) for the year	1,623	10	0
Fees for survey of sailing-vessels for the year...	88	0	0
Fees for survey of vessels for seaworthiness	80	17	0
Received for examinations of marine engineers	171	0	0
	£8,801	10	4

RETURN showing the ORDINARY EXPENDITURE of the Inspection of Machinery Department (including Examination of Engineers and Engine-drivers and Survey of Steamers) during the Financial Year ended the 31st March, 1904.

	£	s.	d.
Salaries	4,804	12	4
Travelling allowances and expenses	2,450	6	1
Rent, cleaning offices, and fuel	302	0	0
Advertising	84	13	0
Furniture and additions to offices	25	0	0
Gas	13	10	11
Telephone-rents	44	13	8
Contingencies	916	11	3
	£8,641	7	3

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