# SEVENTH REPORT

OF

# THE MARINE DEPARTMENT

FOR THE

YEAR ENDED JUNE 30, 1872.

PRESENTED TO BOTH HOUSES OF THE GENERAL ASSEMBLY, BY COMMAND OF HIS EXCELLENCY.

WELLINGTON.

1872.

#### SEVENTH REPORT

OF THE

## MARINE DEPARTMENT, FOR THE YEAR ENDED JUNE 30, 1872.

Customs Department (Marine Branch), Wellington, 28th August, 1872.

SIR,-

I have the honor to submit the following Report on the Marine Department for the year ended on the 30th June, 1872:—

2. The usual returns and tabular statements are appended hereto, which furnish detailed particulars of the cost of the Department, and of the cost of the maintenance of the several lighthouses in the Colony during the period referred to, and which show also the amounts collected for pilotage, port charges, light dues, and fees for survey of steamers, &c.

3. Lighthouses.—Inspections of the lighthouses have been made from time to time during the year by one or other of the officers of the Department who could be most conveniently spared for the purpose, as opportunities of visiting the various stations occurred. The whole of the lights have been properly maintained throughout the year; they are at the present time amply supplied with oil and other requisite stores, and the buildings are all in good order. Allusion was made in my last report to the defective condition of the Dog Island Lighthouse tower, and to the necessity that existed for having it strengthened and repaired without delay. The plan designed by Mr. Blackett, the Marine Engineer, for effecting this object by means of a strong framework of durable hard wood, encircled by stout wrought-iron bands, has been successfully carried out; the work, which was superintended by Mr. E. Whiting, was completed at a cost of £978 4s. 3d.\* The cost for materials, &c., was £487 0s. 3d., and for labour £491 4s.; the latter item was considerably increased through the prevalence of wet and inclement weather during the progress of the work. The only other repairs of any importance which had to be made during the past year have been to the tower of the Cape Campbell Lighthouse (an open-framed wooden structure), which, owing to faulty work in its construction, required wedging up and fastening throughout. Whilst these repairs were being executed, the opportunity was taken to have the lighthouse painted; it was, when built, painted white and red in alternate bands; it is now coloured white on the upper and red on the lower half, which enables it to be seen distinctly at a greater distance than formerly.

4. Owing to the isolated position of the Farewell Spit Light, it has been found necessary to appoint a third Lightkeeper at that station. This I believe was the original intention, but a trial was made with two Keepers only when the light was first exhibited. It soon became evident, however, that a Second Assistant Keeper was required, both on account of the distance that has to be travelled by the Keepers to procure fresh provisions, and of the heavy work entailed on them in conveying the oil and other stores to the lighthouse from the place where these stores are landed from the steamer that takes them to the Spit. The Lightkeepers' dwellings not affording sufficient accommodation for three Keepers, a cottage had to be provided for the Third Keeper; the timber, &c., for it, and for a staging to be erected between the Keepers' dwellings and the lighthouse tower, was provided by the Government at a cost of £131 1s., and the building and staging were constructed by the Keepers, under the direction of the Principal Keeper, who is a carpenter, and who has industriously occupied himself since his appointment to Farewell Spit with work of various kinds about the lighthouse and dwellings, and has thus saved

considerable expense to the Department.

5. In consequence of a want of harmony between the Keepers at Mana Island Lighthouse, it was found necessary in December last to transfer the Assistant Keeper to Cape Campbell. Soon afterwards the Principal Keeper there preferred several charges against this Assistant. These charges, after careful investigation on the spot by an officer sent from this Department, were found to be entirely without foundation. As this Principal Keeper had already quarrelled several times with other Assistants who had been stationed with him, and had on more than one occasion made groundless or frivolous charges against them, evidently with the intention of getting them removed or dismissed, and as considerable expense was caused in conducting inquiries into these alleged grievances, it was felt that a person of this kind could not any longer be trusted to have charge of a lighthouse, and that his unworthy conduct merited severe punishment. He was accordingly reduced to the rank of Assistant Keeper, and was transferred to another station. His place at Cape Campbell was filled by promoting the Assistant Keeper at Pencarrow, who was the senior on the list of Assistant Keepers, and who, since his promotion, has carried on his duties satisfactorily.

<sup>\*</sup> Of this sum only £552 19s.1d. appears in this year's accounts,—the balance, £425 5s. 2d., having been paid during the current year.

6. Through the courtesy of the Trinity Board in England, arrangements have been made for the oil required for our lighthouses to be purchased by that Board along with its own annual supplies, and to be supplied to the New Zealand Government at contract price. This arrangement is a most satisfactory one, as it insures a supply of oil of the best quality and at the lowest price at which it can be purchased in England in large quantities. Of the last annual supply of 5,000 gallons, the largest portion was ordered in casks similar to those in which lighthouse oil is supplied to the Trinity Board instead of in five-gallon drums as heretofore, whereby a saving of £70 was effected; the remainder was in strong tin-lined drums, fitted with large screw bungs, and are intended to be used for distributing oil to the lighthouses, so that in future the whole annual supply of oil can be procured in casks, and afterwards repacked into these drums for conveyance to those stations where it is difficult to land oil in larger packages.

7. From particulars given in a correspondence printed and laid before the Imperial Parliament, it appears that a very considerable saving could be effected, and at the same time a more brilliant light produced, by using kerosene instead of colza oil. I have therefore been making inquiries of the lighthouse authorities in various places where I understand mineral oil is used, with the object of seeing whether the same kind of oil could not with advantage be made use of in New Zealand. As great attention is now being devoted in Great Britain and other parts of the world to the improvement of lamps for burning mineral oil in lighthouses, I have little doubt that the Department will at an early date be in possession of such full and reliable information on this subject as will enable it to take

steps for adopting the use of kerosene.

8. The cause of the delay in erecting the small light which had been procured for the Manukau Heads was explained in last year's Report. Pending the construction of a road from the landing-place near the Heads to the signal station on the top of the hill, by which the apparatus and the materials required for the construction of the tower, &c., were to be carried up, the cases containing the apparatus and lamps, &c., were sent on to Onehunga, and were there stored in the Custom House, a stone building, which, along with several others, was burned down in December last, when the apparatus was unfortunately destroyed. This loss, much as it is to be regretted, has however had the good effect of causing steps to be taken for providing a larger and more suitable light. Orders have been sent home for a dioptric apparatus and lantern of the third order for a fixed light to illuminate an arc of 180°, and strengthened at the most important seaward section by a dioptric glass mirror of 90°.

9. The Light Dues collected during the year amounted to £5,904, being £328 13s. 8d. in

- 9. The Light Dues collected during the year amounted to £5,904, being £328 13s. 8d. in excess of the amount collected in the previous year. The cost of maintenance, exclusive of superintendence, amounted to £5,759 6s. 7d.; but as the services of the "Luna" were obtained on several occasions to convey stores to the lighthouses, and to shift keepers and their families from one station to another, this sum does not represent the actual total cost, which would have been about £500 more than the amount stated if private steamers had been chartered for carrying out the services that were performed by the "Luna." The expenses last year were increased by the cost of repairs at Dog Island, and the cost of materials for Keepers' dwellings, &c., at Farewell Spit. Taking one year with another, it may be considered that the light dues will about pay for the cost of maintaining the lights.
- 10. Flat Rock Beacon.—A contract was taken in March last for the erection of a new beacon on Flat Rock, off the Island of Kawau, to replace the one that was swept away in the previous March, just a year after it was completed. The new beacon is to be a pyramidal structure of dressed stone, strengthened and cramped together with iron, and is to be surmounted by an iron cage; the design was by Mr. J. Stewart, C.E.; the amount of the contract was £1,084; it has been stipulated that the work is to be finished early in December next.
- 11. Examinations of Masters, Mates, and Engineers.—Regulations for these examinations were made by an Order in Council, dated the 4th January last, and promulgated in the New Zealand Gazette; they were also printed in pamphlet form, and forwarded to the various Custom Houses throughout the Colony for distribution to candidates for examination. These Regulations are almost identical with those now in force in the United Kingdom, and were so framed with the object of insuring that certificates issued under them should be recognized as of the same value as those issued by the Board of Trade, so as to enable the holders of them to command British ships in any part of the world. The Regulations were forwarded to the Board of Trade in a letter from this Department, dated the 13th April last, copy of which is appended hereto, and in which will be found described in detail the several steps that have been taken for carrying out the conditions imposed by the Board of Trade with regard to certificates to be issued in accordance with the provisions of "The Merchant Shipping (Colonial) Act, 1869." I fully expect to hear in the course of the next two months that an Order in Council has been issued by Her Majesty, declaring that certificates of competency issued in New Zealand under the Regulations referred to shall be of the same force as those issued by the Imperial Government. It will be advisable, I think, when that intimation reaches the Colony, that those clauses of "The Merchant Shipping Act, 1854," now in abeyance, that make it compulsory on Masters and Mates to have certificates, should be brought into operation, by Order in Council, under "The Merchant Shipping Acts Adoption Act, 1869." No reasonable objection can be urged against this course, as Masters and Mates who have served in those capacities before the 1st January, 1871, and have had their usual place of residence in New Zealand for a period of not less than three years then next preceding, if they are unwilling to undergo examinations, can now obtain certi

which was subsequently passed. A considerable number of these certificates have already been issued under authority of this Act, and applications for them continue to come in from all parts of the Colony. I should here observe that when certificates of service for foreign-going ships are issued, the persons to whom they are granted are informed that such certificates have not the same force as certificates of service issued in the United Kingdom; that they are not recognized by the Board of Trade, and that they are only valid in New Zealand and in New South Wales; but that it is probable that the other Australian Colonies will also recognize them.

12. Wrecks and Casualties.—The number of casualties to shipping that occurred on the coasts of the Colony in 1871-72, was 38, of the aggregate tonnage of 3,104, being considerably in excess both in numbers and tonnage of the casualties of the previous year, during which there were 27 casualties, of 2,173 tons; but the loss of life was less, being only 11, against 27 in 1870-71. Of these six belonged to the unfortunate schooner "Rifleman," which sailed from Lyttelton on the 10th October last, never afterwards to be heard of; and three comprised the crew of the schooner "Ocean Bird," which vessel capsized off Stevens Island in April last. The severe gale which was experienced at Taranaki, Nelson, and Wellington, on the 10th, 11th, and 12th of November last, added several to the list of casualties

13. The usual return of wrecks from the Wreck Register will be found with the Appendices hereto; together with a Wreck Chart, showing the places at which the several casualties occurred. In the return of casualties will be found particulars of two wrecks which took place at a distance from New Zealand—viz., the "Indiaman," a Swedish vessel of 1,200 tons, which was totally lost at Easter Island, latitude 27°9′30″ S., longitude 109°25′20″ W.; and the "Sea Breeze," belonging to Auckland, of 70 tons, totally lost at Starbuck Island, in latitude 5°24′S., longitude 155°50′ W. The Master who was in command of the "Sea Breeze" when she was lost, was the same person who had his certificate cancelled in Auckland in February, 1870, for stranding the cutter "Marwell," on a rock off the Island of Tiri Tiri. This circumstance shows the necessity that exists for bringing into force the Regulations above reperiod to of requiring that vessels shall be commanded only by Masters holding certificates; for if Masters can be appointed to vessels after having had their certificates cancelled, it is obvious that the prospect of punishment for neglect, by the suspension or cancellation of certificates, will soon be regarded with indifference, and that one of the main objects of holding official inquiries into wrecks will thus be defeated.

14. Corrections of Charts.—Representations reached the Department lately from various sources that Cape Turnagain was about six miles to the southward of the position assigned to it on the Admiralty Chart and in the New Zealand Pilot. Being aware that a trigonometrical survey of the Province of Hawke's Bay had lately been made under the directions of the Inspector of Surveys, I wrote to that officer requesting him to be good enough to furnish such information as he was able respecting this error in the chart, in order that I might forward the particulars to the Hydrographical Department of the Admiralty, for the purpose of having the chart corrected. Captain Heale at once responded by sending the true latitude of the Cape (40° 29′ 47″, instead of 40° 22′, as given in the New Zealand Pilot), which was forthwith published a "Notice to Mariners." He has since forwarded a tracking the Triespan and the Cape of the Point at tracking the Triespan and the Cape of the Point at tracking the Triespan and the Cape of the Point at tracking the Triespan at the Cape of the Point at tracking the Triespan at the Cape of the Point at tracking the Cape of the Cape from the Trigonometrical Survey Map, showing the coast from Black Head to Castle Point, together with an Admiralty Chart on which the true position of Cape Turnagain is given, and with the coast line corrected; these corrections will be transmitted to the Admiralty as soon as I receive a corrected outline of the coast from Castle Point to Port Nicholson, which the Chief Surveyor of the Province of

Wellington has kindly promised to supply as soon as the topographical map of that part of the Province, now being compiled, is completed.

15. The only Marine Surveying done during the past year has been the fixing of the position of the "Ahuriri Reef," near Waikouaiti Bay. A plan of this reef, together with all necessary information to enable mariners to avoid the dangerous ground in its vicinity, has been forwarded to the Hydrographer

of the Admiralty.

I have, &c., WILLIAM SEED,

The Hon. the Commissioner of Customs.

Secretary of Customs.

#### (Enclosure.)

Customs Department (Marine Branch),

Wellington, New Zealand, 13th April, 1872.

Referring to the Despatches of the Right Honorable the Secretary of State for the Colonies of the 26th August, 1869, and the 25th May, 1871, relative to "The Merchant Shipping (Colonial) Act, 1869," and in obedience to the direction contained in the last-named Despatch, that all correspondence arising out of the instructions enclosed therein should be carried on direct with the Board of Trade, I have now the honor to report the steps that have been taken in this Colony for carrying into effect the provisions of section 8 of the Act in question.

2. The Act was proclaimed in New Zealand on the 4th of May, 1870. Copy of Proclamation

enclosed herein.\*

SIR.

3. An Act was passed by the General Assembly of New Zealand, intituled "The Merchant Ships Officers Examination Act, 1870." Under this Act, regulations for the examination of masters, mates, omeers Examination Act, 1870. Under this Act, regulations for the examination of masters, mates, and engineers for certificates of competency, were made on the fourth of January last, and were at once promulgated in the New Zealand Gazette. Copies of these regulations are enclosed herein.† It will be seen that they are almost a literal transcript of the Board of Trade Regulations.

4. Examination papers, specimens of which are forwarded herewith, have been prepared on the model of those issued by the Board of Trade.

5. Examiners are appointed by the Governor in Council.

6. Two officers of this Department have been appointed Examiners in Seamanship and Navigation, namely, Mr. Robert Johnson, formerly a master in the Mercantile Marine, the number of whose certificate of competency is 4002, and Robert Atherton Edwin, a retired Commander of the Royal Navy, Should any additional Examiners be required, they would have to satisfy the present Examiners of their fitness for the office.

7. The Examiner of Engineers, Mr. Joseph Nancarrow, holds also the office of Inspector of Steamers and Engineer Surveyor in this Department. When additional Examiners of Engineers are required, they will be selected in the same manner as such officers are selected by the Board of Trade.

- 8. Certificates will only be granted to persons who have been domiciled in New Zealand, or who have served in ships registered in the Colony, or in ships employed in the coasting trade for at least three years immediately preceding their application to be examined. Every precaution will be taken to prevent persons who from want of necessary service, or from incompetency or misconduct, have failed in obtaining certificates in any other Colony or in the United Kingdom, from obtaining certificates in New Zealand.
- 9. The certificates to be issued have not yet been printed: they will have the name of the Colony prominently printed on the face and back, and they will be as nearly as possible similar in shape and form to the certificates issued by the Board of Trade. They will be numbered consecutively. Specimens of the certificates, and the number of copies on paper required by the Board of Trade, will be sent as soon as they are printed.

10. The names of all persons who pass their examinations, with the number, description, and date of their certificates, and also the names of those who apply to be examined, and who fail to obtain certificates, and the cause of failure, will be duly and promptly reported to the Board of Trade by this

11. By "The Merchant Ships Officers Examination Act Amendment Act, 1871," certificates granted in New Zealand are subject to the provisions respecting cancellation and suspension contained in sections 241 and 242 of the Imperial "Merchant Shipping Act, 1854," and in sections 11 and 23 of the Imperial "Merchant Shipping Act Amendment Act, 1862."

12. Copies of the Merchant Ships Officers Examination Act of 1870, and of "The Merchant Ships Officers Examination Act Amendment Act, 1871," are transmitted herewith.

13. I trust that the arrangements reported herein will be considered satisfactory by the Board of Trade and that it will be great enough to advise that Hen Meicetr's Order in Council under "The

Trade, and that it will be good enough to advise that Her Majesty's Order in Council under "The Merchant Shipping (Colonial) Act, 1869," may take effect with respect to all certificates of competency that may be granted in New Zealand after the 1st of May next.

I have, &c., William Seed, Secretary of Customs.

The Assistant Secretary, Marine Department, Board of Trade, Whitehall Gardens.

#### REPORT OF MARINE DEPARTMENT.

RETURN of the Total Expenditure of the MARINE DEPARTMENT for the Financial Year 1871-72.

Vote 53.	Nature of Expenditure.	Details of	Total Amount	
Item.		Expenditure.	Voted.	
1 2 3 4 5 6 7 8 to 18 19 20 21	Marine Engineer Inspector of Steamers and Nautical Assessor Inspector of Steamers and Engineer Surveyor Examiner of Masters and Mates in Navigation Clerk Local Inspectors of Steamers Expenses under "Enquiry into Wrecks Act, 1869" Lightkeepers' Salaries Beacon on Flat Rock, Hauraki Gulf Repairs to Dog Island Tower Repairs to Lighthouses Additions to Houses; Tools and other permanent Lighthouse Stores Lighthouse Contingencies—including the Payment of temporary Keepers, Freight, &c. General Lighthouse Contingencies, Oil, &c. Lightkeepers' Travelling Expenses Local Officers' Travelling Expenses Local Officers' Travelling Expenses Charts Buoys and Beacons  Totals	£ s. d	£ s. d. 200 0 0 380 0 0 380 0 0 380 0 0 300 0 0 175 0 0 250 0 0 26 4 0 3,288 18 5 39 18 6 552 19 1	# s. d. 200 0 0 380 0 0 380 0 0 380 0 0 370 0 0 175 0 0 250 0 0 500 0 0 750 0 0 3,500 0 0 10,175 0 0

<sup>\*</sup> In addition to this there is a liability of about £720, being balance of cost of oil shipped from London, the invoice of which has not been received.

RETURN showing the Cost of Maintenance of the New Zealand Lighthouses during the Financial Year 1871-72.

Name of Lighthouse.		Repairs and Stores of a Permanent Nature.	Oil and other Annual Supplies and Contingencies.	Keepers' Salaries.	Total Expenses for the Year.
		£ s. d.	£ s. d.	£ s. d.	£ s. d.
liri Tiri		20 19 8	161 7 0	<b>340 0 0</b>	522 6 8
Farewell Spit		171 8 . 0*	144 2 7	397 9 11	713 0 6
Nelson		28 12 8	30 12 6	180 0 0	239 5 2
Mana Island		15 5 3	177 15 1	324 11 10	517 12 2
Pencarrow Head		46 11 8	219 8 0	340 0 0	605 19 8
Cape Campbell		66 6 7	153 19 2	331 12 2	551 17 11
odley Head		7 1 8	177 9 0	$315 \ 4 \ 6$	499 15 2
airoa Head		27 18 0	104 10 5	320 0 0	452 8 5
Nugget Point		111	196 12 4	310 0 0	506 12 4
Dog Island		565 11 1	154 17 6	430 0 0	1,150 8 7
Totals	[	949 14 7	1,520 13 7†	3,288 18 5	5,759 6 7

<sup>\*</sup> Includes the cost of materials for Second Assistant Keeper's house.

† This sum includes £720, the estimated balance of the cost of oil shipped from London, the invoice of which has not arrived.

RETURN of the Amount Collected during the Financial Year 1871-72, as Fees under the Steam Navigation Act, the Merchant Ships Officers' Examination Act, and for SALE of Charts, &c.

	Nature of Receipt.											
		et de la		,					£	s.	d.	
Fees under Steam Navigati	on Act		***		***	•••			511	7	0	
Fees under Merchant Ships	Officers'	' Examina	tion Act		•••		•••	[	. 8	-	-	
Sale of Charts, &c	• • • •	•••	•••	•••	•••	***	***	•••	72	6	6	
	Total	for 1871-	2						591	13	6	

### REPORT OF MARINE DEPARTMENT.

RETURN of the Amount received for Pilotage, Port Charges, &c. (being Provincial Revenue), at the various Ports of New Zealand, during the Financial Year 1871-72.

	Name of Pro	vince and of	Port.			Amount Re for Pilotag		Amount Received for Port Dues, &c.	Totals.
,		,				£	. d.	£ s. d.	£ s, d
AUCKLAND-								429 7 5	*1,568 0
Auckland	•••	•••	•••	•••		1,138 1	3 4	99 17 9	99 17
Thames	•••	•••	•••	***		 54	5 0	74 1 2	128 6
Onehunga	***	•••	•••	•••	•••		$egin{smallmatrix} 5 & 0 \\ 1 & 2 \\ \end{bmatrix}$	18 12 5	55 13
Kaipara	•••	***	•••	•••	••• [		8 2	5 4 5	51 12
Russell	***	•••	•••	•••			6 10		8 6 10
Mongonui	•••	•••	•••	•••	•••	84 1			84 19
Hokianga	•••	•••	•••	***		038 1	9 0	•••	04.19 (
				•		1,369 1	4 0	627 3 2	1,996 17
Taranaki				· ····					
New Plymout	h	•••	•••	•••		39	0 4	17 0 1	56 0 5
Hawke's Bay-						401	0.10	100 0 0	561 O A
Napier	•••	•••	***	•••		461	9 10	100 0 9	561 9 7
Wellington-					ļ	00.1	<b>~</b> 4		60.10
Wanganui	•••	•••	•••	•••	••• ]	63 1		FEO. 15 F	63 16 4
$\mathbf{W}$ ellington	•••	•••	•••	•••		798 1	58	558 15 5	1,357 11
						862 1	2 0	558 15 5	1,421 7
Nelson-							<del>,</del>		
Nelson	•••	•••	•••	•••	••• }	630 1	2 0	21 13 2	652 5 2
COUNTY OF WES	TLAND								
Hokitika	•••	•••	•••			32 1			32 11 4
Okarito	•••	•••	•••	***		<b>2</b>	66		26
					į	34 1	7 10		34 17 10
Canterbury-									
Lyttelton				•••		1,350	0 1	816 19 1	2,166 19
Timaru	•••	•••	•••	•••			_	9 13 9	9 13
	•••	***	•••	•••	•••				
						1,350	0 1	826 12 10	2,176 12 1
Отабо—				,					
Oamaru	•••	•••	•••	•••		0 1		200 15 4	201 11 '
Dunedin	•••	•••		•••	•••	1,622 1	27	859 10 8	2,482 3 3
Invercargill	•••	•••	• • • •	•••				53 7 2	53 7 2
Bluff	•••	•••	•••	•••		235 1		55 8 2	291 7 3
Riverton	•••	***	•••	•••	•••	37 1	6 0	1 18 6	39 14 (
						1,897	3 11	1,170 19 10	3,068 3 9
	TOTALS	, 1871–72				6,645	9 0	3,322 5 3	9,967 14 3
	TOTALS	, 1870–71		•••		6,611 1	9 0	3,261 15 9	9,873 14

<sup>\*</sup> Paid to Auckland Harbour Board.

RETURN showing the Quantity of Oil consumed at the New Zealand Lighthouses, during the Financial Year 1871-72.

		Name of	Lighthou	se.					Quantity of Oil consumed.
									Gallons.
Tiri Tiri	 	•••	•••	•••			•••		469
Farewell Spit	 			•••	•••		***		427
Nelson	 	•••							120
Mana Island	 	•••	•••				•••		595
Pencarrow Head	 								670
Cape Campbell	 								439
Godley Head	 							•••	525
Tairoa Head	 •••	•••	• • •	•••					400
Nugget Point	 	•••							688
Dog Island	 					•••	•••		609
•		Total	•••	•••	•••	•••	***		4,942

RETURN showing Amount of Light Dues collected during the Financial Year 1871-72.

			Port at w	hich Collec	eted.					Amou	nt.	
										£	s.	d
Auckland	•••	•••	•••							1,197	5	C
Russell	•••					•••			]	45	0	7
Hokianga										4	8	1
Wangarei						,				7	19	3
New Plymouth	•••									17	0	5
Wanganui	•••							•••		20	10	5
Wellington	•••	•••		•••						732	2	1
Napier	•••	•••		***						39	17	2
Picton					•••					49	16	6
Havelock	•••		•••							11 1	18	3
Kaikoura	•••	•••								2	10	3
Nelson	•••	•••	•••	••••	•••		•••	***		530	19	5
Westport	•••	•••	•••				•••			83	15	6
Greymouth	•••	•••	•••	***	•••	•••	•••				13	Ö
Hokitika	•••	•••		***			•••			33	2	5
Lyttelton		•••			•••		•••			1,084		11
Akaroa	•••	•••		•••	•••	•••	•••			22		11
Timaru	•••	•••		•••		•••				52	9	7
Oamaru		•••			•••						LŠ	3
Dunedin	•	•••				•••		•••			7	3
Invercargill					•••				• • • • • • • • • • • • • • • • • • • •		18	4
Bluff	•••	•••				***		•••		378	4	4
Riverton	•••	•••	***	•••	•••	•••	•••	•••		7.1		1
ANI TOLOGIA	•••	***	•••	***	•••		•••	•••				
	Total for	1871–72								5,904	0	0
	Total for				•••	•••	•••	•••		5,575	6	4

RETURN of Masters, Mates, and Engineers, who have been Examined under the Regulations issued under "The Merchant Ships Officers' Examination Act, 1870," during the Financial Year 1871-72.

Name	3.		Rank for which Passed. Date of Exa					amination.
Thomas Edward Simms Arthur Irvine Charles Lloyd William James Jobson Archibald Kelly Daniel Smith Alexander Crawford		 	Master, Home Trade Master, Home Trade Master, Home Trade First Class Engineer Second Class Engineer Second Class Engineer Second Class Engineer				5 March, 12 April, 11 May, 8 June, 11 June, 25 June, 29 June,	

RETURN of Masters and Mates to whom Certificates of Service have been Granted under "The Merchant Ships Officers' Examination Act Amendment Act, 1871," during the Financial Year 1871-72.

Nam		Rank for w Certificate has Granted	been	Whether the Cer Granted for Ho Foreign Tra	me or	Date of Issue Certificate.	of	No. of Certificate.	
John Bain . Hugh Falconer And Stephen Tall . James Edie .	erson	 	Master Master Master Master Master Master		Home Foreign Foreign Home Home		25 June, 1872 25 June, 1872 25 June, 1872 29 June, 1872 29 June, 1872 29 June, 1872		2,001 2,002 2,003 2,004 2,005 2,006

# REPORT OF MARINE DEPARTMENT.

RETURN of General Pilotage Exemption Certificates issued during the Financial Year, 1871-72.

No. of Certificate.	Names of Masters to whom Certificates have been issued.	Names of Vessels for which Certificates have been issued.	Ports included on Certificate.
102 103	John McKenzie William A. Payne	1 700 1 41 43 43	Auckland, Kaipara, Wellington, Lyttelton, Akaroa, Timaru.  Auckland, Wellington, Lyttelton, Akaroa, Timaru, Dunedin, Okarito, Hokitika, Greymouth, Westport.
104 105	William Davidson Gordon McKinnon	Tell Ahuriri	Wellington, Lyttelton, Akaroa, Timaru, Dunedin. Napier, Wellington, Lyttelton, Akaroa, Timaru, Dunedin, Bluff Harbour, Riverton.
106	Gilbert Harrison	. Frowning Beauty	Auckland, Wellington.
107	James Smith		Auckland.
108	Peter Matzen	173 1	Russell, Auckland.
109	John Paterson	170	Lyttelton, Dunedin, Bluff, Picton, Greymouth, Hokitika, Okarito.
110	Joseph Trenear George A. Phillips	Chartinham & Clampas	Wellington, Lyttelton, Akaroa, Timaru.  Auckland, Wellington, Lyttelton, Akaroa, Timaru, Dunedin,
112	William Desar	TD ''	Hokitika. Auckland.
113	John Harrison	Data and Alfred	Auekland.
114	John R. Gourlay	NT. 4-1 O	Lyttelton, Akaroa, Timaru.
115	John McColl	lar a -	Dunedin, Lyttelton, Akaroa, Timaru.
116	Daniel Brent		Auckland, Wellington, Lyttelton, Akaroa, Timaru.
117	Colin Chadwick		Wellington, Lyttelton.
118	Benjamin Jenkins	A1	Wellington, Lyttelton.
119	William Hopkins   Donald Sinclair	Ια 1	Dunedin. Dunedin, Lyttelton, Akaroa, Timaru.
121	Donald Sinclair     Peter Toomey	In.a	Wellington, Lyttelton, Akaroa, Timaru, Dunedin, Greymouth,
122	T T	G 77	Hokitika, Okarito.
123	I homas Blake	1 1 1 70 7	Wellington, Lyttelton, Akaroa, Timaru, Dunedin.
124	William Gathercole	l m	Wellington, Lyttelton, Akaroa, Timaru.
125	John McLean	A 11 A 17	
1		Claud Hamilton,	Wellington, Lyttelton, Dunedin, Bluff.
		Gothenburg, Omeo,	( Tromingson, 25 section, 2 and am, 15 and
126	Tanamaiah Damaina	Rangitoto, Tararua.	Auckland Tattelton Altono Mimonu
127	Jeremiah Downing David Walker	0.4 7 1 1 1	Auckland, Lyttelton, Akaroa, Timaru.
128	Archibald Black	i man	Auckland, Wellington, Lyttelton, Dunedin.
129	Lawrence Stevens	α	Dunedin.
130	John Dunn	. Lismore	Auckland.
131	Thomas Logan	l n .	Auckland.
132	Edmund J. Tooker		Lyttelton, Akaroa, Timaru, Dunedin.
133 134	Gregory S. Norris Archibald Bell	100 / 0/1 7577	Russell, Auckland.  Lyttelton, Akaroa, Timaru, Dunedin, Westport, Greymouth,
		1	Hokitika, Okarito.
135 136	Alexr. D. McGillivray Griffith Evans	Go-ahead Ben Nevis	Wellington, Westport, Greymouth, Hokitika, Okarito, Nelson.  Auckland, Lyttelton.
137	Francis Ruwald	α .	Wellington.
138	John Austin	0, 1,1,	Russell, Auckland, Mongonui, Kaipara, Manukau, Waitara, New Plymouth, Lyttelton, Akaroa, Timaru.
139	William Rouse	. Claud Hamilton	Wellington, Lyttelton, Akaroa, Timaru, Dunedin, Bluff.
140	Hugh Paterson	T 4 1	Lyttelton, Akaroa, Timaru, Dunedin, Hokitika.
141	John Bain	. Esk, City of Newcastle	Auckland, Taranaki, Wellington, Lyttelton, Akaroa, Timaru, Oamaru, Dunedin.
142	Joseph Pallant	. Wave	Auckland.
143	Benjamin B. Creagh	. Kennedy	Nelson, Westport, Greymouth, Hokitika, Okarito.
144	Robert Hilton	incre i	Lyttelton, Akaroa, Timaru.
145	Patrick Cooney		Auckland. Lyttelton, Akaroa, Timaru.
$\begin{vmatrix} 146 \\ 147 \end{vmatrix}$	Daniel Walkley James Dillon	337-11	Wellington, Nelson.
148	Michael Yates	V . NT. 1	Auckland, Kaipara.
149	Charles Hodge	1305 3	Lyttelton, Dunedin.
150	James Edie	Wallace	Dunedin.
		1	4.

RETURN of MASTERS and Engineers to whom Certificates of Competency, under "The Steam Navigation Act, 1866," have been issued during the Financial Year 1871-72.

Remarks.	In lieu of No. 125. In lieu of No. 208. In lieu of No. 214. In lieu of No. 175. In lieu of No. 144. In lieu of No. 120.
No. of Oertificate.	218 219 220 221 222 223 224 224 208 208 209
Date of Issue of Certificate.	July 28, 1871 Aug. 12, " Dec. 19, " Jan. 6, 1872 Feb. 1, " 8, " 12, " April 6, " Jan. 24, 1872 Jan. 24, 1872
Vessel for which Certificate has been issued.	Go-ahead Ahuriri Aluriri Clyde Samson Effort Effort Go-ahead Waipa Result Devonport Moa
<u> </u>	
te.	         
Class of Certificate	Coasting Service only
	Coasti Exter Exten Coasti River Coasti Exter Exter Cond Cond Cond
Nature of Examination.	Master  "" "" Engineer ""
Name and Position of the Examining Officer.	Not again examined
	:::::::::::
Name.	Peter Doile  F. McKinnon  F. Williams  S. Stevens  A. D. McGillivray W. G. Kirkpatrick Peter Seaton P. Duffy  A. Milne  J. H. Davidson

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RETURN of Wrecks on which Inquiries have been held under "The Inquiry into Wrecks Act," or for which Casualty Requires have been received, between 1st July, 1871, and 30th June, 1872.

	Name of	Master of Vessel,	Edward Perkins,	John Le Brun.	H. J. Bowan.	J. Ruxton.	James Stuart.	Samuel Bolt.	Joseph Hobbs.	Abraham Palmer. Thomas Holmes.	William Davidson.	William Scott.	Ferdinand Holm.	Thomas Hughes.
	Rinding of the Count of Inquire.	· Craber vo crao ora o granta	Mooring lines chafed by rocks, a heavy sea coming into the bay.	Error of judgment on part of master, in running in too close to the land in bad weather, with glass very low.	No blame whatever attributed to the master or his officers; and that all was done that possibly could be done to save the ship.	Master exonerated from blame.	:	Stress of weather.	Miscalculation of the vessel's position Joseph Hobbs.	Master of Charles Edward blamed for causing collision by want of care, and for going to sea without inguiring whether Murray wanted assistance.	Neglect of master in not having shortened sail in time.	Vessel was accidentally caught on a sunken anchor.	Accident caused by change of wind whilst vessel in stays.	Accidental. No blame attributed to master.
	Wind.	Force.	Moderate	Fresh breeze	Fresh and unsteady.	Moderate	Strong gale	Whole gale	2	Light	Fresh to moder- ate & squally.	Strong breeze	Light	Fresh breeze
2, 1014.		Direction,	N.E.	≱	N.N.W.	N.N.E.	S.S.W.	S.S.W.	S.S.W.	N.E.	S.S.E.	S. E.	Variable.	S.W.
Deciment tay early, 1071, and even early, 1072,	Place where	Casualty took place.	ï	About three miles North of Hokitika River.	Oamaru Bay, South side.	Bar of Buller River.	Fifty miles East of Flat Point.	Four miles South of East Cape of Great Barrier Island.	Okapu Bay, Great Barrier Island.	Bar of Buller River.	Steeple Rock, Wellington Harbour.	South of entrance of Buller River.	South end, Barrett's Variable. Reef, Wellington Harbour.	North Spit of the entrance to the Hokitika River.
11, 10	Number of	Lost.	I	:	÷	÷	63	:	÷	· · :	:	:	ī	÷
O OST TOO	Nature	Casualty.	Stranded; total loss.	2	\$	Stranded; partial loss.	Loss of life.	Stranded; total loss.	Stranded; partial loss.	Collision; partial loss of Murray.	Stranded; partial loss.	8		e.
Den	Nature	Cargo.	Ballast	General	Coal	General	Produce	Firewood	General	* *	Ballast	General	Ballast	General
	Number	Passengers.	:	ŧ.	:	:	:	:	63	ca :	:	:	ro	:
	Number	Crew.	ଫ	œ	11	9	ro	63	9		6	÷	10	so .
	ister 1986.	gəA moT	21	113	296	94	99	13	81	90	302	98	303	135
	E.	0	Ketch	Brigantine	Barque	Schooner	•	Catter	Schooner (3-masted.)	Schooner,	Barque	Schooner	Schooner (3-masted.)	Brigantine
	Name of Vessel;	Age and Class when known.	Brothers and Sister, 20 years.	Waterman, 4 years.	Premier, 9 years.	Canterbury, 8 years.	Dunedin	Peter Cracroft, 9 years.	Riffeman, 9 years.	Murray, s.s., 8 years, and Charles Edward, p.s., 7 years.	Tell	Lyttelton, p.s., 13 years.	Lady Bird, 20 years.	Zephyr
	Date	Casualty.	1871. June 11	July 20	». 31	Aug. 9	,, 13	30	,, 30	Sept. 9	" 13	,, 14	,, 21	30

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7	Master of Vessel,	John Wilson.	William Norris.	John Austen.	Alexande: Manna	Charles Evans.	Henry Pierce.	John A. Scott.	William A. Payne.	James Pilkington,	Gordon McKinnon.
	of ₩ %		Loss be- ed either case of Tiri Tiri for which was taken show off sel, which a emart								
ale de la companya d	Finding of the Court of Inquiry.	Master obliged, by weather, to take bar at unfavourable time of tide.	Want of proper knowledge of Wangape Harbour, of which place there appears to be no chart.	Master blamed for wreck. Loss believed to have been caused either by drunkenness (as in case of Marwell, lost by him on Tiri Tiri about 3 years ago, and for which his certificate of service was taken away,) or from a desire to show off the capabilities of his vessel, which had the reputation of a smart sailer.	Wind dying away; vessel became un- manageable in break.	Driven on a lee shore by stress of weather.	Vessel was lost through thickness of weather and strength of ebb tide, for which it does not appear that sufficient allowance was made.	Unavoidable accident; cable parted during heavy S.E. gale.	Vessel was apparently not well found in anchors or cables.	Accident, which would probably have been avoided had the master been provided with a chart of the harbour.	Master blamed for being too close to land; also for allowing sluice valves to remain open; certificate not suspended because danger not on chart.
Wind.	Force.	Fresh gale	Moderate breeze	NO.	Ē	Whole gale	Whole gale	e.	\$	Strong gale	Fresh
	Direction.	S. E.	S. to S. W.	E.S.E.	Calm.	<b>2</b> 2	<b>3</b> . 五	S. 民	S.民	N.W.	S.W.
Plane where	Casualty took place.	Bar of the Wairoa River.	Rock in entrance of Wangape Harbour.	Reef at N.W. end of Staarbuck Island.	4 mile N. of Fox's River, Middle Island.	Entrance to the Wairarapa Lake, Palliser Bay.	North end of Kapiti Island.	N.W. point of Worser's Bay, Wellington Harbour.	Bill's Cove, Port Underwood.	Dorset Point, Wellington Harbour.	On a sunken rock near Jones' Head, Waikouaiti Bay.
Number	Lives Lost.	:	:	None	ŧ	:	:	Ē	:	i	:
Nature	of Casualty.	Stranded; total loss.	*	2	Stranded; partial loss.	Stranded; total loss.	Stranded; total loss.	Stranded; partial loss.	Stranded; total loss.	Stranded; partial loss.	Stranded; total loss.
Nature	of Cargo.	General	2	Guano	Ballust	6	General	Timber	*	Malt	General
Number		:	: 	<b>ਜ</b>	H	н	:	:	<b>H</b>	:	13
Number	of Crew.	67	ro	9	4	4	61	က	က	က	16
ster age.	Regin nnoT	15	79	20	26	44	16	28	22	33	131
Ē	Kig.	Ketch	Schooner	Schooner	Barge	Schooner	Ketch	£	*	*	Schooner
Name of Vessel;	Age and Class when known.	Midlothian	Leonidas, 14 years.	Sea Breze, 10 years.	Blackwall, 5 years.	Waihopi, 5 years.	Mosquito, 9 years.	Alert, 16 years.	Angelina, 3 years.	Collingwood, 5 years.	Ahuriri, s.s., 7½ yesra, A1 for 9 yesra.
Date	Casualty.	1871. Oct. 5	" 14	°,	Nov. 9	" 10	, 10	,, 10	" 11	" 17	, 22

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	Name of	Master of Vessel.	Edward Kerns.	David Arthur Stuart.	Joseph Ellis.	William Lombard.	Peter Toomey.	James Moore.	R. P. Crouch.	Roger Owen.	H. D. Bower.	Albert Miltopæus.
continueu.	Finding of the Court of Inquiry.		Loss result of circumstances altogether Edward Kerns. beyond the control of parties concerned.	Moderate breeze Error of judgment on part of pilot David Arthur Stuart.	George Baker, mate of the Golden Crown, did not properly comply	with articles 19 and 1º of the Kergulations for Preventing Collisions at Sea.	Supposed to have foundered at sea during heavy S.E. gale.	Heavy gale caused vessel to drag anchor; no blame attached to master.	Casualty unavoidable; master not to R. P. Crouch. blame.	Not sufficient allowance made for Roger Owen.	Error of judgment in not having steered a more weatherly course.	In absence of master and officers, no conclusion can be arrived at; but if men's account is to be relied on, vessel should not have been taken from Melbourne without docking and thorough repair. It seems a most extraordinary proceeding to strand a ship on the rocks—after being at anchor for several days—kedged ashore in order to "break her up to save what material they could." Assistance at the pump was obtained from the Island, and there is nothing to show that any in-
	Wind.	Force.	:	Moderate breeze		*.	Supposed Heavy gale.	Whole gale	Gale	Light breeze	Strong	<b>.</b>
,		Direction.	Calm	S.W.	2	% %	Supposed S.E.	S.E.	N.E.	N.E.	E.S.E.	Ä
Theorem on Theorem and South and Sou	Place where Casualty took place.		Mataura River; 500 yards west of the entrance.	½ mile S. of Ponto Point, Kaipara.	Between Ponui Istand and the Sand-		Supposed Last seen off Cape Supposed 6 Campbell. S.E.	South Head of West Wanganui Inlet, Middle Island.	Oamaru Bay	Scotia Rock, Bluff Harbour.	2½ miles south of Cape Brett.	Easter Island
	Number of	Lives Lost.	:	:		:	pesoddng	:	:	:	:	Ε
	Nature	Casualty.	Stranded; total loss.	•	Collision;	little damage.	Supposed foundered.	Stranded; total loss.	°.	Stranded; partial loss.	Stranded; total loss.	2
	Nature	Cargo.	Ballast	General	Ballast	*	"	General	î	:	Ballast	Ballast, and 35 tons potatoes.
	Number	Passengers.		:	116	:	:	:	<b>:</b>	H	:	
	Number	Crew.	ಣ	6	19	ಣ	<b>9</b> .	ಣ	9 ,	က	9	18
	ister .92s.	Hegi InoT	30	ଥି	208	19	81	22	61	16	75	002,1 besoqqu2
	75.5		Ketch	Schooner	<b>.</b>	Cutter	Schooner (3-masted.)	Ketch	Schooner	Cutter	Schooner	Ship
	Name of Vessel; also,	Age and Class when known.	Aparima	Midge, 13 years.	Golden Crown, p.s., 1 year,	and Avon, 7 years.	Rifleman, 9 years.	Heathcote, 5 years.	Onehunga	Pilot, 6 years.	Huntress	Indiaman, 17 years.
	Date	Casualty.	Nov. 25	Dec. 14	,, 28		Not known.	1872. Feb. 20	,, 24	Mar.13	,, 15	" 16

RETURN of Wrecks on which Inquiries have been held, &c. -continued.

3° 7¢	Name of Master of Vessel.	·	David Hamilton.	R. Judge.	Thomas Jackson.	James Malcolm. James Robinson.	Matthew Hooper	G. Dalmer.	William Walker.	Phillip Jenkins.
	Finding of the Court of Inquiry.	crease of danger necessitated the casting of her ashore. It appears only reasonable to suppose that, by shipping some of the Kanakas and dividing the watches, the vessel might havebeen navigated in safety to Callao, seeing that at the time of anchoring the ordinary orew had been able to pump the vessel almost clear of water.	:	This vessel was found bottom up off D'Urville Island.	Master attempted to take ressel over bar while there was a heavy fresh in the river, and insufficient wind to give proper steerage way.	Master of Maori acted with prompti- tude and judgment, but mate (James Leys) could not be acquir- red of carelesanes.	Want of judgment on part of Robert Foreman, in charge, in attempting to weather the Flat Rock.	Accident of the seas.	Vessel would not answer her helm, owing to strong current.	Vessel having lost sails, had to be beached to save life.
Wind.	Force.		Moderate	Supposed gale	:	Light	Moderate	Moderate gale	Fresh	Gale
	Direction.		S.W.	Supposed S.E.	Calm	W. by N.	vi	S.W.	S.W.	i.
	Casualty took place.		Bar of Wairoa River, Hawke's Bay.	Supposed near Jack-Supposed son's Head. S.E.	Whakatane River, Bay of Pleuty.	Seven or eight miles east by north from W. by N. Oamaru.	On a small rock 50 or 60 feet south of Flat Rock, off Kawau Island.	Off Kaikoura Pen- insula.	On upper rocks south side of Catlin's River.	About four miles south of bar of Wanganui River.
1 6	Lives Lost.		:	Supposed 3		:		:	÷	:
Nature	of Casualty.		Stranded, total loss.	Supposed scapsized;	Stranded; partial loss.	Collision, with partial loss.	Stranded; partial loss.	Dismasted; partial loss.	Stranded; total loss.	2
Nature	of Cargo.,		General	Produce	Timber	", General	Timber	2		
Number	of Passengers.		67	:	•	15 ::	<b>C3</b>	.:	:	:
Number	of Crew.		က	es .	က	16	<b>ආ</b>	4	10	က
ter.	sig9A sanoT		13	88	31	118	0e	32	09	27
	Rig.		Cutter	Schooner	Cutter	Schooner Brigantine	Cutter	Schooner	*	. *
Name of Vessel;	also, Age and Class when known.		Mahia, 8 years.	Ocean Bird, 1 year.	Woodstock	Maori, s.s., Al 10 years, age 4 years, and	age 10 months. Nautilus, 6 years.	Edward, 1½ year.	Caledonia, 8 years.	Kate
Date	of Casualty.	1872.	Mar. 30		May 4	ro ro	,, 26	,, 27	" 30	June 19

## REPORT OF THE MARINE DEPARTMENT.

RETURN of STEAM VESSELS to which CERTIFICATES have been issued in New Zealand, during the Financial Year 1871-72.

Name of V	essel.		Tons Register.	Horse Power of Engines.	Nature of Propeller.	Class of Certificate.	Nature of Engines.	Remarks.
Blue Nose	•••		42	30	Paddle	River	Non-condensing	
Waipa			30	30	,,	"	1)	
Enterprise No.	1.	•••	22	14	,,	,,	**	ļ
Enterprise No.			40	32	,,	Extended River	1)	İ
~			11	7	Twin Screw	River	,,	ļ
Lady Bowen			29	34	Paddle	Extended River	Condensing	i
Duke of Edinbu	rgh		54	35	,,	Sea-going	,,	ļ
			89	60	,,	,,	,,	
		•••	23	14	,,	Extended River	Non-condensing	
Devonport			23	12	,,	River	**	Ì
~· ·· ·	•••		26	30	,,	Extended River	,,	
Golden Crown			207	140	,,	,,	Condensing	
	•••		44	24	Screw	Sea-going	Non-condensing	
~ *	•••	•••	152	60	Paddle .	,,	Condensing	
			147	50	Screw	l ,,	,,,	
ra 00 i			13	12	Paddle	River	Non-condensing	[
D 1:	•••	•••	13	10	,,	Extended River	,,	
	•••				Screw	River	,,	Steam Launcl
	•••			•••	,,	,,	"	Ditto.
rT T	•••				,,,	"	,,	Ditto.
Southern Cross			65	40	, ,,	Sea-going	Condensing	1
D1 1	•••	•••	416	120	,,,	,,	,,	İ
	•••	1	298	90	i	!	,,	
	•••	•••	261	80	"	"	"	ŀ
<b>-</b> .¥		•••	184	50	"	"		ļ
~ ~ ~ .		••• '	83	30	Twin Screw	"	Non-condensing	
	•••	•••	130	50	Screw	· ·	Condensing	Wrecked.
(T	•••	•••	158	60		"		11200200
	•••		165	50	"	"	,,	
	•••		91	30	"	"	***	
D.	•••	***	18	10	"	River	Non-condensing	i .
	• • •	••••	39	9	Paddle	Extended River	Condensing	
	•••	••••	28	10	Paddle	River	Non-condensing	1
	•••		24	25	Twin Screw	Extended River		1
	•••		43	30	Paddle	River	"	ļ
	•••	••••	27	32		Extended River	"	
	•••		46	15	Screw	River	"	
~ 1,5	•••	••••	47	30	1	Extended River	23	1
	•••	••••	50	25	"		Condensing	
n.	• • •	••••			"	River	Non-condensing	Steam Launch
	• • •	••••	90	 35	"	Sea-going	Tron condomining	Steam Battie
	• • •			30	"		Condensing	
	• • •	•••	126	60	,,	. "	-	<b>S</b>
	•••		118	70	Paddle	"	"	1
	•••	••••	108	40		"	"	(
	• • •	• • • •	56		"	River	Non-condensing	Ī
	•••	••••	79	60	,,	· -		]
	• • •		32	20	,,	"	"	1
Lady of the Lal	e		57	25	"	Sea	Condensing	
	• • •	•••	111	70	Stern Wheel	_	Non-condensing	ļ
Fuapeka		•••	24	60		River	Tion-condensing	1
	• • •	• • •	21	20	Paddle Paddle	"	"	1
	•••	•••	36	30	,,, Co	Son	Condensing	1
Storm Bird		•••	67	30	Screw	Sea-going	_	ł
		• • •	48	30	Twin Screw	"	,,	1
Lioness	•••		26	60	Paddle	,,	"	
Dispatch	• • •		38	40	, "	,,	,,	1
Wallabi	• • •	• • •	101	25	Screw	"	"	1
Lyttelton	•••		86	25	Paddle	73 , 73 70.	"	i
Lady Barkly	•••	• • •	30	25	,,	Extended River	"	Į
Charles Edward	t		89	60	, ,,	Sea-going	**	
Murray		• • •	56	18	Screw	,,	,,	
			125	36	Twin Screw			

