

(Received at London Office

19 *Port of* Lyttelton.

Port of Lyttelton.

Gross	418	Vessel built at	Vlaardingen.	By whom	N.V. Scheep v.d. Windt.	When	1922.-10
Net	364						

Engines made at Stockholm. By whom Aktiebolaget Atlas Diesel. When 1934.
Boilers when made (Main) (Donkey) Annan, Cochran No. 19641.

Main Boilers	<i>Owners</i> Richardson & Co. Ltd.	<i>Owners' Address</i> <small>(if not already recorded in Appendix to Register Book.)</small>
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Monkey Boilers _____
Pressure _____
in Boilers _____

Managers _____

If Surveyed Afloat or in Dry Dock Both.

Port Napier, N.Z. Voyage N.Z. Coast.

Particulars of Classification (which must be inserted)

key Boilers	150 lbs.	(State name of Dock.)	Lyttelton.	precisely as in Register Book & Supplements).	
				CHARACTER.	
				✕ for Special Survey	
				Years	Machinery and Boiler
				Inspected	Surveys
				Repaired.	

Report No. _____	Port _____	Date of last Survey and of Periodical Surveys. _____	Y ass ex _____	(Including date of N.B. if any).
iculars of Examination and Repairs (if any)		+ 100 A1		+ LMC 8,30

at Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on cases of which, must be stated, should be separated from Repairs due to other causes; and

of Damage (the cause of which must obviously be stated) and, if possible, the amount of damage, being detailed in the body of the report, should be briefly summarised at the end of the report. State also the name and initials of any letters respecting this case.

and his services for this purpose, and why they were declined _____

amage report made by anyone else? If so, by whom? _____

Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? -----
 Stamped:- No. 19041, Lloyd's Test 275 Lbs.
 W.P. 150 Lbs. J.S.C. 5-7-34.

is not done, state for what reasons? _____

parts of the Boilers could not be thus thoroughly examined? _____

for to assure himself of the thorough efficiency of those parts of each Boiler?

When was last date of internal examination of each boiler _____

Did you ever examine the Safety Valves of the Main Boiler? _____ To what pressure were they afterwards adjusted under steam? _____

Surveyor examine the Safety Valves of Donkey Boiler? Yes. To what pressure were they afterwards adjusted under steam? 150 Lbs.

Surveyor examine all the manholes, doors and their fastenings of the Main Boilers?....., and of the Donkey Boilers?.....

Surveyor examine the drain plugs of the Main Boilers?....., and of the Donkey Boiler?.....

Surveyor examine all the mountings of the Main Boilers? _____, and of the Donkey Boiler? _____

Yes _____ No _____ No Liners Is an approved appliance fitted at the after end of _____ Yes.

Is shaft now been drawn and examined? Yes. Is it fitted with continuous liner? Yes. the shaft to permit of it being efficiently lubricated? Cedarval
 Is now been changed? If so, state reasons Oil Glan

shaft now fitted been previously used? _____ Has it a continuous liner? _____ Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? _____

te of examination of Screw Shaft..... State the distance between lignum vitæ or bearing metal of stern bush and top of after bearing of screw shaft.....

engine parts, when referred to by numbers, should be counted from forward.

Steam Engines and Boilers were removed and a Polar Diesel Oil Engine, Type N 361 M, 2 stroke,

e, single acting, No. 85270, was fitted at this Port. The Engine was surveyed at the Builders'

by the Society's Surveyor at Stockholm as per Report No. 3929 dated 20th August 1934.

was surveyed by the Society's Surveyor at Newcastle, N.S.W. - Marks - Lloyd's No. 4104 ^{E.M.H.L.}_{4-10-54.}

short length was finished by Messrs. Andersons Ltd., at Lyttelton, the Contractors, who fitted

Machinery. The Tunnel Shafting is in good order. Diameter 7.625". The Tail Shaft is in good order has been replaced. Smallest diameter at Base of Cone 8.515". A new outer Bush has been fitted.

Propellor supplied from Hamburg has been fitted. Marks - Lloyd's No. 1434 H.S.
31-8-34.

Propellor has been properly fitted and the Nut Properly tightened up in my presence.

Pitch of the Propellor is 5'3³". The Diameter of the Propellor is 8'10 5/16th". No. of Blades 3

eral Observations, Opinion, and Recommendation:—

state clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9,11, B.&M.S. 9,11, or \times L.M.C. 9,11, 140 lb., F.D., &c.)

To have record + MC 12, 34. (Oil Engines, and Donkey Boiler new) 1934.

... (per Section 29) ...
 machinery & examination
 of shirt. Fee (if any)

of Electrical Installations £5 - -
expenses (if chargeable) £ 19

Received by me, _____
_____ 19____

G. J. [Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

...ing expenses. £1 10
...tee's Minute **TUE. 20 MAR 1935**

ed. + Linc 12.34 + NE 12.34

A-10-94-150

100 16.

MACHINERY:- The Machinery has been properly fitted and the Bed Plate and Holding Down Bolts as per Rule, and Collision Chocks bolted to the Engine Seating at each Corner of the Bed Plate. The Shafting has been properly lined up and all Tunnel Bearings overhauled, new Foundation Bolts throughout, and new Coupling Bolts fitted at all Couplings of Tunnel Shafting.

The Machinery was tested alongside the Wharf under working conditions, ahead and astern, and is satisfactory. At the trial run at Sea, the Main Engines ran for three hours at 200 Revs. per minute. I was present at the trial Run and I also tested the Machinery alongside the Wharf; with Air Bottles at a pressure of 350 Lbs., and Auxiliary Compressor stopped. 13 starts without trouble and a pressure of 250 Lbs. remained in the Air Bottles on completion. An Indicator showing Ahead and Astern Direction has been fitted on the Fly Wheel Guard.

DATES OF EXAMINATION OF HOLD DOWN BOLTS:- 12-10-34, 16-10-34.

ENGINE SEATING:- Sept. 14th 1934 to Oct. 12th 1934.

DATES OF EXAMINATION OF ENGINES UNDER WORKING CONDITIONS:- 28th, 29th and 30th Dec. 1934.

DATES OF EXAMINATION OF TUNNEL SHAFT:- 12-10-34.

DATE OF EXAMINATION OF SCREW SHAFT:- 12-10-34.

DATE OF EXAMINATION OF PROPELLOR:- 3-11-34.

DATE OF EXAMINATION OF STERN TUBE:- 3-11-34.

The Stern Bush is 2' 10" long.

The Propellor was fitted on the Shaft on Nov. 27th 1934.

SEA CONNECTIONS:- All Sea Connections were opened out and replaced in good order and new Bolts have been fitted to the Flanges on Shell Plates. The Main Injection Valve has been moved from the Port to the Starboard Side for use with the Cooling Water System of the new Engines.

DATE ON COMPLETION OF SEA CONNECTIONS:- 30-11-34.

AIR PIPES:- The Air Pipes from the Compressor have been made according to Rule and I tested these before fitting in place by Hydraulic to 700 Lbs per sq. Inch and afterwards in place under working conditions.

FUEL PIPES:- All Fuel Pipes are of steel and I tested these in position with Joints tightened to 35 Lbs. per Sq. Inch Air Pressure and afterwards under working conditions.

LUBRICATING OIL PIPES:- I tested these in position, 35 Lbs per Sq. Inch Air Pressure and afterwards under working conditions.

STEAM PIPES:- I tested all new Steam Pipes in Engine Room and all the Pipes on Deck to 300 Lbs Per Sq. Inch Hydraulic before fitting and afterwards under working conditions.

LUBRICATING OIL TANKS:- These were constructed by Messrs. Andersons Ltd., electric welded throughout, E.M.F. Electrodes, and are satisfactory, and have been tested under working conditions.

PUMPS:- The Main Engines are fitted with one Double-Acting Bilge Pump, diameter 3.937", stroke 5.5".

BALLAST PUMP:- The Ballast Pump is a Mumford Duplex Steam Pump, diameter 6", stroke 6".

GENERAL SERVICE PUMP:- Steam Worthington Duplex, Diameter 4", stroke 5".

ELECTRIC GENERAL SERVICE PUMP:- Manufactured by Messrs. Andersons Ltd., single-acting Horizontal 4" diameter, 5" Stroke, Belt driven by Crompton Motor 110 Volts, 16 Amps 1400 Revs.

OIL FUEL TRANSFER PUMP:- Viking Rotary driven by Asea Motor 110 Volts 18 Amps 1400 Revs.

REPORT 9.

CONTINUATION OF REPORT NO. 1252 ON M.V. "PAKURA".

There is also a Hand Oil Transfer Pump fitted.

The Donkey Boiler is fitted with a Worthington Duplex Feed Pump and a Steam injector.

OTHER AUXILIARIES:- Auxiliary Air Compressor - Direct coupled by a Clutch to a Crompton Parkinson Generator is a 2 Stage Compressor No. 36779 by Beavell & Co., 2 Cylinders 1000 Revs. The Generator and Compressor are driven by Diesel Engine which was surveyed at Manchester as per Report No. 8151. The Compressor is marked HP Test 700 Lbs.

OIL PURIFIERS:- One Oil Fuel Purifier and one Fuel Oil Purifier both Delaval, Belt driven by Asea Motors 110 Volts 18 Amps each.

LUBRICATING OIL HEATER:- Manufactured by Messrs. Andersons Ltd., tested to 200 Lbs Hydraulic, afterwards under Steam, under working conditions.

COOLING WATER FILTERS:- 2 Cooling Water Filters are fitted between the Cooling Water Inlet and the Pump on the Main Engines. These can be operated independently and the Cooling Water Inlet Valve is fitted with Gauze and arranged so that it can be cleaned while the Vessel is at sea. Either filter can be cleaned or examined without interfering with the efficiency of the Pump.

REDUCING VALVE:- A new Steam Reducing Valve has been manufactured by Messrs. Andersons Ltd., to enable the Deck Machinery being run at a reduced pressure. I tested this reducing Valve to 300 Lbs Hydraulic pressure and afterward under steam under working conditions.

DYNAMO ENGINE:- The original Steam Engine and Dynamo have been overhauled and tested under working conditions. This is a Clarke Chapman No. 6741, Type 2S, Revs 450, direct coupled dynamo, Volts 110, Amps 41.

NEW GENERATOR:- As per Electrical Report.

LAGGING:- The Donkey Boiler and Silencer Exhaust Pipe have been lagged with a non-conducting composition encased by Galvanised Steel Plating. The Donkey Boiler and Silencer have been properly fastened and stayed.

AUXILIARY CONDENSOR:- The original Auxiliary Condenser has been retained and properly fastened and stayed. All Steam Exhaust Pipes have been tested under working conditions and all pumps have been tested under working conditions.

SUCTIONS:- The Suctions of the Main Engine Bilge Pumps in the Engine Room are of the following sizes:- Centre 3", Wings 2 1/2". Main Engine Bilge Pump Suctions in Holds and in Aft Peak and in Fore Peak 2".

The number of Auxiliary Pumps connected to the Main Bilge Lines are 3 i.e. 2 Steam, 1 Electric.

The number of Suctions connected to the Main and Auxiliary Bilge Pumps and sizes of same are as follows:-

Engine Room - 2 of 3", and 3 of 2 1/2".

Holds - 4 of 2".

Fore Peak - 1 of 2".

Aft Peak - 1 of 2".

Aft Well - 1 of 2".

The Ballast Pump is fitted with an Independent 3" Suction in the Engine Room. All Suctions are fitted with Roses and in the Engine Room these are always accessible.

The Sea Connections can all be operated without lifting Engine Room, Platform Plate, and the Discharge Valves are always accessible from the Engine Room on the Plating of the Vessel. The Bilge Suction Pipes and Valves are arranged to prevent communication between the sea and the Bilges. The Discharge Valves are above the Deep Water Line.

WATER TIGHT DOORS:- The Shaft Tunnel is fitted with a Water Tight Door operated from the Engine Room Grating. This has been worked and is in good order.

FIRE FIGHTING APPLIANCES:- Fire Fighting Appliances have been fitted according to Rule and are as follows:- 1 perforated Steam Pipe, discharging under Donkey Boiler and fitted with a control Wheel Valve in Engine Room and on Boat Deck.

N.B.-If this Report is copied by copying Press, special care must be taken that the copying paper is not so much damped as to spread the ink, or to cause it to show through to the other side.

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Lloyd's Register Foundation

REPORT 9.

(3).

CONTINUATION OF REPORT NO. 1252 ON THE M.V. "PAKURA".

1 Sea Water Hose Connection from Deck Water Service Pipe in Engine Room with Hose complete, and in addition there is a Foamite Installation Tank fitted on top of Engine Room Grating.

OIL FUEL TANK CONTROLS:- The Suction Valves in Engine Room on the Nos. 3 and 4 D.B. Fuel Oil Tank can be operated in the Engine Room near the Telegraph and Main Engine Control. They can also be operated from the Boat Deck. The Port and Starboard Independent Oil Fuel Tank Suction Valves can be operated in the Engine Room and on the Boat Deck.

DAILY SERVICE TANK SUCTION VALVE:- This can be operated in the Engine Room and also from the Boat Deck. All other Valves and cocks can be operated without lifting Platform Plating.

DONKEY BOILER:- The Donkey Boiler is a Cochran Oil Fuel Burning.

Marks:- No. 19041, Lloyd's Test 275Lbs. W.P. 150 Lbs.
J.S.C. 5-7-34.

adjusted the Safety Valves to blow at 150Lbs per Sq. Inch.

PLANS:- Blue Print Plans No. 5040, 5041, 5042, and 5048 showing Engine Seating ~~Seating~~ and Construction of Independent Oil Tanks were forwarded with my letter of November 5th 1934.

Plans Nos. D5065, C 5066 and 5073 and 1 Blue Print of Daily Service Tank are forwarded now under separate Cover.

The "PAKURA" leaving this Port made a non-stop Run to Auckland, a distance of 674 Miles, and the Superintending Engineer reported that the Engines and Stability of the Vessel ~~was~~ ^{was very} satisfactory.

*concluded that plans of the
arranged to
fuel tanks & pumping arrangements
be submitted for approval
to Christchurch R.Z. Survey
and confirm this
should also be informed that
they immediate & know-
handed (provided they remain
in position) if the works are done
G.A. 20/11/34*

003400-0253

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No. of days 2



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