

REPORT ON MACHINERY.

No. 2895
SAT. 16 NOV 1907

Port of *Appledore*

Received at London Office

No. in Survey held at *Appledore*

Date, first Survey *Sept 16*

Last Survey *Nov 7* 1907

Reg. Book.

H. Supt on the *Iron Screw Steamer New Zealand.*

(Number of Visits *2*)

Tons

Master *J. Murphy* Built at *Beverley* By whom built *Cochrane/Cooper/Schofield* When built *1886*

Engines made at *Hull* By whom made *C. D. Holmes & Co.* when made *1886*

Boilers made at *Hull* By whom made *Amos & Smith* when made *1900*

Registered Horse Power *45* Owners *Osborn & Wallis* Port belonging to *London*

Nom. Horse Power as per Section 28 *64* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines

Description of Engines			No. of Cylinders	No. of Cranks
Dia. of Cylinders	Length of Stroke	Revs. per minute	Dia. of Screw shaft as per rule as fitted	Material of screw shaft
Is the screw shaft fitted with a continuous liner the whole length of the stern tube in the propeller boss			Is the after end of the liner made water tight	
If the liner is in more than one length are the joints burned			If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive	
If two liners are fitted, is the shaft lapped or protected between the liners			Length of stern bush	
Dia. of Tunnel shaft as per rule as fitted	Dia. of Crank shaft journals as per rule as fitted	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under collars
Dia. of screw	Pitch of Screw	No. of Blades	State whether moveable	Total surface
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work	
No. of Donkey Engines	Sizes of Pumps	No. and size of Suctions connected to both Bilge and Donkey pumps		
In Engine Room			In Holds, &c.	

No. of Bilge Injections *sizes* Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record *S.*) Manufacturers of Steel

Total Heating Surface of Boilers *1200 sq ft* Is Forced Draft fitted No. and Description of Boilers *One cylindrical multibular*

Working Pressure *150 lbs* Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler *40 sq ft* No. and Description of Safety Valves to each boiler *Two direct spring* Area of each valve *4.068 sq in* Pressure to which they are adjusted *150 lbs* Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *6 in* Mean dia. of boilers *11 in 3* Length *9 in 9* Material of shell plates *Steel*

Range of tensile strength Are the shell plates welded or flanged *flanged* Descrip. of riveting: cir. seams *Riv lap*

seams *Riv butt* Diameter of rivet holes in long. seams *1 3/16* Pitch of rivets *8.03* *Leap of plates or width of butt straps* *1 1/4*

Strength of longitudinal joint rivets *8.5* *83 g* Working pressure of shell by rules *236 lbs* Size of manhole in shell *12 x 16*

of compensating ring *1 3/8* *Riv* No. and Description of Furnaces in each boiler *Three Morrison's* Material *Steel* Outside diameter *33*

of plain part top Thickness of plates crown *15* Description of longitudinal joint *welded* No. of strengthening rings

Working pressure of furnace by the rules *209 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16* Back *9/16* Top *9/16* Bottom *3/4*

of stays to ditto: Sides *7/8 x 7/8* Back *7/8 x 7/8* Top *7/8 x 8* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *182 lbs*

Material of stays *Steel* Diameter at smallest part *1 3/8* Area supported by each stay *60 sq in* Working pressure by rules *162 lbs* End plates in steam space: Material *Steel* Thickness *3/16* Pitch of stays *15 x 15* How are stays secured *With nuts & washers* Working pressure by rules *194 lbs* Material of stays *Steel*

Diameter at smallest part *2 3/4* Area supported by each stay *225 sq in* Working pressure by rules *233 lbs* Material of Front plates at bottom *Steel*

Thickness *15/16* Material of Lower back plate *Steel* Thickness *15/16* Greatest pitch of stays *13 x 4 3/4* Working pressure of plate by rules *301 lbs*

Diameter of tubes *3* Pitch of tubes *4 x 4* Material of tube plates *Steel* Thickness: Front *15/16* Back *1/2* Mean pitch of stays *12 x 12*

cross wide water spaces *13* Working pressures by rules *199 lbs* Girders to Chamber tops: Material *Steel* Depth and

of girder at centre *6 x 8* Length as per rule *34* Distance apart *4 1/2* Number and pitch of stays in each *two 8*

Working pressure by rules *204 lbs* Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

ately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Stays fitted with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

See 237 & 207

Lloyd's Register Foundation

B1077-0531

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description			
Made at	By whom made	When made	Where fixed	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
Values	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment
If fitted with easing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams	
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint
Working pressure of furnace by rules	Thickness of furnace crown plates		Stayed by	
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey	

SPARE GEAR. State the articles supplied:— *Survey for Re-Classification* To be completed at Bristol.
Screw shaft & machinery exam'd

It is submitted that this vessel WILL BE eligible for the record. L.M.C. 11.07

The foregoing is a correct description. *N.B. (in parts) 00 Main the main steam pipe annealed & tested. 150 lbs*
 Manufacturer. *8.11.07.* *25.11.07.* *2.1.08.*

Dates of Survey while building	During progress of work in shops - -	Is the approved plan of main boiler forwarded herewith
	During erection on board vessel - -	
	Total No. of visits	

Dates of Examination of principal parts—Cylinders		Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts		
Completion of pumping arrangements	Boilers fixed		Engines tried under steam		
Main boiler safety valves adjusted	Thickness of adjusting washers				
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.		
Material of Steam Pipes	Test pressure				

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel having been submitted for Reclassification, she has been placed in dry dock, and the propeller, sternbush, sea valves, cocks, and fastenings, cylinders, pistons, slide valves, condenser, pumps, propeller shaft, thrust, and crankshaft examined and found in good condition*)

Main boiler examined and found in good order. This boiler was fitted in 1900 for a working pressure of 180 lbs, but new safety valve springs have been fitted and the safety valves adjusted to 150 lbs

To complete the survey A bilge injection 3/4" dia to be fitted, and the main steam pipes to be annealed, and tested by hydraulic pressure of 300 lbs per sq inch. As there are no means for doing this at Appledore, it is proposed to do this at Bristol

The engines and boiler of this vessel are now in good working condition and eligible in my opinion to receive the notification of L.M.C. 11-07 N.B.00 when the survey is complete

The amount of Entry Fee..	£	When applied for.
Special	£ 10. 10	19
Donkey Boiler Fee	£	When received.
Travelling Expenses (if any) £ 8	2	19

George Lisle Hindmarsh
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute **FRI. 29 NOV 1907** **TUES. 7 JAN 1908**
 Assigned *See minute on Bm Rm*
 5021



The Surveyors are requested not to write on or below the space for Committee's Minute.