

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

31 JUL 1925

Date of writing Report

10

When handed in at Local Office 29<sup>th</sup> July 1925. Port ofNo. in Survey held at  
Reg. Book.

So. Shields

Date, First Survey 13<sup>th</sup> Feb 1925Last Survey 29<sup>th</sup> July 1925

36724. on the

SS. "WAIPAHI"

(Number of Visits 40)

Tons { Gross 1720

Net 1080.

When built 1925.

Built at Howden-on-Tyne By whom built Northumberland S.B. Co. Ltd.

Yard No. 388.

Engines made at So. Shields By whom made G.T. Grey &amp; Co.

Engine No. 613. when made 1925.

Boilers made at Jarrow-on-Tyne By whom made Palmers S.B. &amp; I Ltd. Boiler No. 1051-2. when made 1925.

Registered Horse Power

Owners Union S.S. Co of New Zealand Ltd. Port belonging to Wellington N.Z.

Nom. Horse Power as per Rule

223.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

Trade for which Vessel is intended

Ocean Going.

ENGINES, &amp;c.—Description of Engines

Inverted Triple Expansion

Revs. per minute

Dia. of Cylinders 18 $\frac{1}{2}$ " 31" 52"

Length of Stroke 36"

No. of Cylinders 3.

No. of Cranks 3.

Crank shaft, dia. of journals

as per Rule 10.04"

Crank pin dia.

10 $\frac{1}{4}$ "

Crank webs

Mid. length breadth 14 $\frac{3}{8}$ "Thickness parallel to axis 6 $\frac{3}{4}$ "

Intermediate Shafts, diameter

as per Rule 9.563"

as fitted 9 $\frac{3}{4}$ "

Thrust shaft, diameter at collars

as per Rule 10.04"

as fitted 10 $\frac{1}{4}$ "

Tube Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule 10.64"

as fitted 11 $\frac{3}{8}$ "

Is the

screw

shaft fitted with a continuous liner

Yes.

Bronze Liners, thickness in way of bushes

as per Rule 5 $\frac{1}{8}$ "as fitted 1 $\frac{1}{16}$ "

Thickness between bushes

as per Rule 4 $\frac{1}{2}$ "as fitted 4 $\frac{1}{2}$ "

Is the after end of the liner made watertight in the

propeller boss

Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

Yes

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

Yes

If two liners are fitted, is the shaft lapped or protected between the liners

Yes

Is an approved Oil Gland or other appliance fitted at the after

end of the tube shaft

No.

Length of Bearing in Stern Bush next to and supporting propeller

4'-2 $\frac{1}{2}$ " (4'-2 $\frac{1}{2}$ ")

Propeller, dia.

13'-0"

Pitch

13'-6"

No. of Blades

4

Material

Bronze

whether Moveable

No

Total Developed Surface

64

sq. feet

Feed Pumps worked from the Main Engines, No.

2.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Bilge Pumps worked from the Main Engines, No.

2.

Diameters

Stroke

Can one be overhauled while the other is at work

Yes

Feed Pumps

No. and size

1. 7" 5 $\frac{1}{2}$ " x 8" duplex

Pumps connected to the

Main Bilge Line

No. and size

ONE. 6" x 7" x 12" single (Steam)

How driven

Steam

also

1. Electrical Ballast pump 3 $\frac{1}{2}$ " suction

Ballast Pumps, No. and size

1. 5 $\frac{1}{2}$ " 3 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ "

Lubricating Oil Pumps, including Spare Pump, No. and size

2.

Diameter

Stroke

Can one be overhauled while the other is at work

Yes

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room

3 @ 3 $\frac{1}{2}$ " dia

one 4" dia Bilge Suction

In Holds, &amp;c.

No 1 hold. 2 @ 3 $\frac{1}{2}$ " diaNo 2 hold. 2 @ 3 $\frac{1}{2}$ " diaFore Peak 1 @ 2 $\frac{1}{2}$ " dia

After Peak one @ 3" dia

Main Water Circulating Pump Direct Bilge Suctions, No. and size

1 @ 4" dia

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

one 4" dia

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strain wires

Yes.

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight run pipes to the bilges

Yes.

Are all Sea Connections fitted direct on the skin of the ship

Yes.

Are they fitted with Valves or Cocks

Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes.

Are the Overboard Discharges above or below the deep water line

Below.

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes.

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes.

What Pipes are carried through the bunkers

None.

How are they protected

Yes.

What pipes pass through the deep tanks

Yes.

Have they been tested as per Rule

Yes.

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

Yes.

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one

compartment to another

Yes.

Is the Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from S.R. Grating.

MAIN BOILERS, &amp;c.—(Letter for record S.)

Total Heating Surface of Boilers

4000 sq. ft.

Is Forced Draft fitted

No.

No. and Description of Boilers

2. S.E. Multi?

Working Pressure

190 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

25B

Yes

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

Yes

PLANS. Are approved plans forwarded herewith for Shafting

Yes.

Main Boilers

Yes.

Auxiliary Boilers

Yes.

Donkey Boilers

Yes.

Superheaters

Yes.

General Pumping Arrangements

Yes.

Oil fuel Burning Piping Arrangements

Yes.

SPARE GEAR. State the articles supplied:—

2 Top End Bolts, 2 Bottom End Bolts, 2 main bearing bolts, 1 set of Coupling Bolts, 1 set of feed &amp; bilge pump valves, a quantity of assorted bolts, iron of various sizes. Spare screw shaft &amp; propeller. Piston rod, one crank pin, web &amp; crank shaft journal.

The foregoing is a correct description,

GEO. T. GREY &amp; CO. LTD.

H. O. Cunningham

SECRETARY.

Manufacturer of Main Engines

003401-003408-0136

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Lloyd's Register  
Foundation



1925  
 Feb. 13. 20. 24. Mar 23. 31. Apr 9. 17. 22. 27. 28. May 4. 5. 12. 13. 14. 18. 19. 20. 26. 28. June 3.  
 12. 15. 17. 19. 22. 29. 30. July 1. 3. 7. 8. 10. 14. 21. 22. 24. 25. 29.

Dates of Survey while building  
 During progress of work in shops - -  
 During erection on board vessel - - -  
 Total No. of visits 40

Dates of Examination of principal parts—Cylinders 12. 5. 25. Slides 12. 5. 25. Covers 20. 5. 25.  
 Pistons 20. 5. 25. Piston Rods 26. 5. 25, 28. 5. 26. Connecting rods 20. 5. 25.  
 Crank shaft 27. 4. 25. Thrust shaft 19. 6. 25. Intermediate shafts 21. 4. 25 & 6. 5. 25.  
 Tube shaft ✓ Screw shaft 14. 5. 25. Propeller 22. 6. 25.  
 Stern tube 12. 5. 25. Engine and boiler seatings 3. 6. 25. Engines holding down bolts 21. 7. 25.  
 Completion of pumping arrangements 21. 7. 25. Boilers fixed 14. 7. 25. Engines tried under steam 25. 7. 25.  
 Main boiler safety valves adjusted 25. 7. 25. Thickness of adjusting washers P. Boiler PV 1/2. SV 1/2 S. Boiler PV 1/2 SV 1/2  
 Crank shaft material Steel Identification Mark 1114. Thrust shaft material Steel Identification Mark 1131.  
 Intermediate shafts, material Steel Identification Marks 1132. 1132A. 1132B. 1132C.  
 Screw shaft, material Steel Identification Mark 1133. Steam Pipes, material S.D. Steel Test pressure 570-600 lbs. Date of Test 24. 7. 25.  
 Is an installation fitted for burning oil fuel No. ✓ Is the flash point of the oil to be used over 150°F. ✓  
 Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓  
 Is this machinery duplicate of a previous case No. ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under Special Survey — The materials & workmanship are sound and good. The main machinery has been tried out under steam, and all the boilers safety valves adjusted to the working pressure. The machinery of this vessel is in our opinion eligible to have the notation of + LMC 7. 25 & TS CL entered in the register book.

It is submitted that  
 this vessel is eligible for  
 THE RECORD. + LMC 7. 25. CL.

31/7/25.

The amount of Entry Fee ... £ 4 : - :  
 Special 3/5 Total ... £ 33 : 9 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 30 JUL 1925  
 When received, 25 AUG 1925

L. P. Skett & L. R. Horne  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

+ LMC 7. 25 -  
 C. L.

CERTIFICATE WRITTEN



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 Foundation