

## REPORT ON MACHINERY

No. 12809.

Received at London Office

THU. OCT. 6 1921

Writing Report

19

When handed in at Local Office

5. 10. 1921

Port of

Aberdeen

Survey held at

Aberdeen

Date, First Survey 12. 3. 20

Last Survey 7. 4. 1921

Book.

(Number of Visits 60.)

on the

Single sc. "CAIRNSIDE"

Built at Aberdeen By whom built A. Hall &amp; Co. Ltd. No. 570. When built 1921.

Machinery made at Aberdeen By whom made A. Hall &amp; Co. Ltd. No. 283. when made 1921.

Machinery made at do. By whom made do do No. 245. when made 1921.

Registered Horse Power 86. Owners Thomas Rose. Port belonging to Sunderland.

Horse Power as per Section 28 108.3 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

MACHINERY, &amp;c.—Description of Engines Triple expansion. No. of Cylinders 3. No. of Cranks 3.

Diameter of Cylinders 15 1/2", 25", 42" Length of Stroke 24" Revs. per minute 106. Dia. of Screw shaft as per rule 8.62" as fitted 8 3/8" Material of screw shaft steel.

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner fitted Is the after end of the liner made water tight

If the liner is in more than one length are the joints burned yes If the liner does not fit tightly at the part

In the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If two

are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 36"

Dia. of Crank shaft journals as per rule 7.95" as fitted 7.98" Dia. of Crank pin 8 1/8" Size of Crank webs 12 1/2" x 5" Dia. of thrust shaft under

s 8 3/8" Dia. of screw 9 1/8" Pitch of Screw 11 1/8" No. of Blades 4 State whether moveable no Total surface 38 1/2"

Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work yes.

Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work yes.

General 6" x 4" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps

In Holds, &amp;c. one each wing 2 1/4"

Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room &amp; size yes: 2 1/4"

Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none.

Are they Valves or Cocks Both valves &amp; cocks.

Are the Discharge Pipes above or below the deep water line below.

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

How are they protected Strong wood casing.

Are they fitted with a watertight door yes.

Are they worked from yes.

Manufacturers of Steel Glasgow Iron &amp; Steel Coy. Ltd.

Is Forced Draft fitted no. No. and Description of Boilers One, cyl. &amp; multi-ported single ended.

Date of test 12. 4. 21 No. of Certificate 1004.

Area of fire grate in each boiler 44.6 sq. ft. No. and Description of Safety Valves to

Are they fitted with easing gear yes.

INTERNAL Mean dia. of boilers 14 1/2" Length 10 1/2" Material of shell plates S.

Are the shell plates welded or flanged no. Descrip. of riveting: cir. seams d. n. lap.

Pitch of rivets 2 1/4" Lap of plates or width of butt straps 18 1/2" x 1 1/2"

Working pressure of shell by rules 182.9 Size of manhole in shell 16" x 12"

No. and Description of Furnaces in each boiler 3 plain (with draught) Material S. Outside diameter 43 1/2"

Description of longitudinal joint weld. No. of strengthening rings

Thickness: Sides 22" Back 11" Top 32" Bottom 32"

Working pressure by rules 180.8

Working pressure by rules 204. End plates in steam space:

Working pressure by rules 184.8 Material of stays S.

Working pressure by rules 188. Material of Front plates at bottom S.

Working pressure of plate by rules 205.3

Mean pitch of stays 9 3/8"

Girders to Chamber tops: Material S. Depth and

Number and pitch of stays in each two: 9 1/2"

% of strength of joint

Description of longitudinal joint

How stayed

Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Is Easing Gear fitted

Pressure to which each is adjusted

Is Easing Gear fitted

W737-0077

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Lloyd's Register Foundation



IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

2 Top & 2 bottom end, bolts & nuts. 2 main bearing & 1 set. Coax  
bolts & nuts: 1 set each. Air, Feed & Bilge pump valves: 1 each main & donkey check valve.  
bolts and nuts assorted, and iron of various sizes.

The foregoing is a correct description,  
For ALEXANDER HALL & CO., LTD

*A. H. McNeil*

SECRETARY.

Manufacturer of Main Engines & Boilers.

Dates of Survey while building { During progress of work in shops - - - 1920 Mar. 12, 18, 25, 31. Apr. 3, 14, 22, 28. May 8, 11, 19, 25, 31. June 14, 17, 29. July 6, 14. Aug. 10, 16, 26. Sep. 1, 11, 19, 25, 31. Oct. 5, 19. Nov. 10. Dec. 9, 21. 1921 Jan. 11, 19, 31. Feb. 4, 9, 15, 17, 18, 24. Mar. 5, 15, 21, 23, 29. Apr. 12, 22. May 5, 6, 12. Total No. of visits 60. June 4, 10, 14, 20, 23, 29. July 1, 2, 4, 6, 7. Is the approved plan of main boiler forwarded herewith Yes.

Dates of Examination of principal parts—Cylinders 29.3.21 Slides 14.2.21 Covers 5.3.21 Pistons 12.4.21 Rods 5.10.21 Connecting rods 5.10.20 Crank shaft 14.6.20 Thrust shaft 19.1.21 Tunnel shafts ✓ Screw shaft 19.1.21 Propeller 23.3.21 Stern tube 29.3.21 Steam pipes tested 25.5.21. Engine and boiler seatings 14.2.21. Engines holding down bolts 25.5.21. Completion of pumping arrangements 20.6.21. Boilers fixed 25.5.21. Engines tried under steam 4.4.21. Completion of fitting sea connections 22.4.21. Stern tube 22.4.21. Screw shaft and propeller 22.4.21. Main boiler safety valves adjusted 4.4.21. Thickness of adjusting washers Starboard  $\frac{3}{8}$ " Port  $\frac{5}{8}$ " bore. Material of Crank shaft S. Identification Mark on Do. 1318.A Material of Thrust shaft S. Identification Mark on Do. 1353. Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts S. Identification Marks on Do. 1352. Material of Steam Pipes Copper solid drawn  $\frac{1}{2}$ " bore, No 5 W.G. Test pressure 360 lbs per sq inch. 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 Section 49 of the Rules 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.)

These Engines, and the Boiler, have been constructed under Special Survey and in accordance with the Secretary's letters, the Rules, and approved plans. The materials and workmanship are good, and on completion they together with the Donkey Boiler (Gls Rept No 40891) were properly fitted on board the vessel and tried under steam with satisfactory results, and are now in good order and in my opinion entitled to the record \* L.M.C. 21 in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 7.21

The amount of Entry Fee ... £ 3 : - : When applied for, 5.10.1921.  
Special ... £ 24 : - :  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : : 8.10.1921.

Committee's Minute

Assigned

14 1921

+ L.M.C. 721

*Ridley*  
13/10/21

*Ridley*

Engineer Surveyor to Lloyd's Register of Shipping.



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