

Rpt. 4.

## REPORT ON MACHINERY.

No. 40076

Date of writing Report

19

When handed in at Local Office 12. 6.

1920. Port of

Received at London Office

FRI. 22 JUL. 1921

No. in Survey held at **KILMARNOCK.**  
Reg. Book.  
on the **S. SOUTH QUAY**Date, First Survey 9. 11. 18. Last Survey 11. 6. 20 19  
(Number of Visits 42)

Master Built at **Montrose** By whom built **Coastal Construction Co (No. 104)** Tons } Gross  
Engines made at **Kilmarnock** By whom made **Grant, Ritchie & Co (No. 1000)** when built 1920. } Net  
Boilers made at **Manchester** By whom made **James Adams (No. 4825-6)** when made 1920.  
Registered Horse Power **105** **125** **125** when made 1920.  
Nom. Horse Power as per Section 28 **105** **125** Is Refrigerating Machinery fitted for cargo purposes Port belonging to **London**  
Is Electric Light fitted

ENGINES, &c.—Description of Engines **Triple Expansion. Surf. Cndg.**

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 15. 25. 40 Length of Stroke 27 Revs. per minute

Dia. of Screw shaft as per rule 8.66 Material of screw shaft as fitted 8 1/2

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes

Is the after end of the liner made water tight

in the propeller boss Yes 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 3' 4"

Dia. of Tunnel shaft as per rule 4.46

Dia. of Crank shaft journals as per rule 7.83

Dia. of Crank pin 8 1/2

Size of Crank webs 12 1/2 x 4 1/8

collars 8 Dia. of screw 11 1/2 Pitch of Screw 9' 9"

No. of Blades 4

State whether moveable 2

Total surface 344

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 14"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 14"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &amp;c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room &amp; 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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

## BOILERS, &amp;c.—(Letter for record ) Manufacturers of Steel

Total Heating Surface of Boilers 1820 Is Forced Draft fitted

No. and Description of Boilers 2-S.E. Marine

Working Pressure 180 Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler 24.6

No. and Description of Safety Valves to

each boiler Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

## SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

41792-0117



# IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: 2 top end bolts, 2 bottom end bolts, 2 main bearing bolts, 1 set coupling bolts, 1 set air, feed, bilge and circulating pump valves, 1 set feed check valves, 1 set piston rings for MP, 1 set rings and springs for LP, 1 propeller, 24 condenser ferrules, 1 set water valves and piston rings for auxiliary feed pump, 1 set water valves and piston rings for donkey pump, 1 boiler tube expander, quantity, assorted bolts, nuts and iron of various sizes, 6 tube stoppers, tools, spanners, packings as per specification

The foregoing is a correct description,

For Grant, Ritchie & Co., Ltd.,

*L. C. Baillie*

Director.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1918 Nov 9-20. Dec 5-23. 30. 1919 Jan 8-22 Feb 5 Mar 20 Apr 10-16 May 15-20-23 June 9-14 July 4 Aug 15 Sept 3-12-26 Oct 10-20-28 Nov 4-11-18 Dec 2-12-19. During erection on board vessel - - 1920 Jan 13-29 Feb 11-24 Mar 2-15-26 Apr 14 May 14-26 June 11 Total No. of visits 42

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 10.4.19 Slides 15.8.19 Covers 10.4.19 Pistons 20.3.19 Rods 20.3.19

Connecting rods 20.3.19 Crank shaft 16.4.19 Thrust shaft 4.7.19 Tunnel shafts 4.4.19 Screw shaft 26-5-20 Propeller ✓

Stern tube 26-5-20 Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓

Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓

Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓

Main boiler safety valves adjusted ✓ Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. No 400 LLOYDS 44.19.18 Material of Thrust shaft Steel Identification Mark on Do. NOT SEEN AT

Material of Tunnel shafts Steel Identification Marks on Do. LLOYDS 48.41 12 W. Material of Screw shafts Steel Identification Marks on Do. 118.47 J.

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel

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 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The materials and workmanship are good. This machinery has been built under special survey in accordance with the Specification and Rules.

The propeller and thrust shaft were not supplied by the Kilmarnock Works and will require to be seen at the fitting out Port.

These engines have been sent to Montreal to be fitted on board and will be eligible in our opinion to have record of R.M.C. (with date) when survey is complete.

Propeller & thrust shafts examined & found in good order. Engines now satisfactorily completed on board, as per Survey Report No 8313.

*John H. Mackenzie*

Received 16/4/20, as per Secretary's letter (of that date) to Dundee.

The amount of Entry Fee ... £ 30:0:0 When applied for. Special ... £ : : paid by ship in the total bill when received. Donkey Boiler Fee ... £ : : rec'd 24/4/20. Travelling Expenses (if any) £ : : 19.

*J. S. Sellar* Engineer Surveyor to Lloyd's Register of Shipping. *M. J. R. Allan*

Committee's Minute GLASGOW 15 JUN 1920

Assigned Deferred.

FRI. 29 JUL. 1921

See Dun 8313

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