

REPORT ON MACHINERY.

No. 34654

Received at London Office

WED. 10. APR. 1918

of writing Report

10

When handed in at Local Office

10

Port of

Glasgow

in Survey held at

Glasgow

Date, First Survey

10th Jan 1913

Last Survey

25th March 1918

Book.

on the

S.S. Malancho

(Number of Vols)

ter

Built at

By whom built

Russell & Co (709)

Tons

Gross

Net

When built

1918

nes made at

Glasgow

By whom made

D. Rowan & Co (682 & 597)

when made

1918

ers made at

Glasgow

By whom made

D. Rowan & Co (682 & 597)

when made

1918

istered Horse Power

Owners

Brookbank Ltd

Port belonging to

Horse Power as per Section 28

858

Is Refrigerating Machinery fitted for cargo purposes

220

Is Electric Light fitted

yes

LINES, &c.—Description of Engines

Expansion

No. of Cylinders

4

No. of Cranks

4

of Cylinders

28" 40" 57" 82"

Length of Stroke

57

Revs. per minute

70

Dia. of Screw shaft

as per rule

16" 68"

Material of

steel

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

the propeller boss

If the liner is in more than one length are the joints burned

length

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

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

Length of stern bush

5' 10"

of Tunnel shaft

as per rule

15' 34"

Dia. of Crank shaft journals

as per rule

16' 10"

Dia. of Crank pin

17"

Size of Crank webs

11" thick

Dia. of thrust shaft under

17"

ra

Dia. of screw

19' 6"

Pitch of Screw

18' 0"

No. of Blades

4

State whether moveable

yes

Total surface

125 ft²

of Feed pumps

2

Diameter of ditto

14 x 19

Stroke

30"

Can one be overhauled while the other is at work

yes

of Bilge pumps

2

Diameter of ditto

6"

Stroke

12"

Can one be overhauled while the other is at work

yes

of Donkey Engines

4

Sizes of Pumps

9" x 12"

10" x 12"

12" x 18"

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

Engine Room

(4)

3 1/2"

Tunnel

two

3 1/2"

7 1/2"

In Holds, &c.

No. 1, 2, 3, 4, 5 & 6

two in each

3 1/2"

of Bilge Injections

sizes

12"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

yes

3 1/2"

All the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

both

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

yes

Are the Discharge Pipes above or below the deep water line

main deck

below the

above

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

pipes are carried through the bunkers

for 2 suction

How are they protected

in timber

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

yes

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

yes

of examination of completion of fitting of Sea Connections

24. 12. 17.

of Stern Tube

24. 12. 17.

Screw shaft and Propeller

see Enk Rpt 19274

see 12. 17

Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from top platform

yes

LERS, &c.—(Letter for record

(S)

Manufacturers of Steel

J. & D. Colville & Sons

1 Aux Boiler

2775 ft²

Total

14,211 ft²

Is Forced Draft fitted

yes

No. and Description of Boilers

3

Double ended

main boiler

1 Aux. S.B.

No. of Certificate

12791

Heating Surface of Boilers

14,364 ft²

Tested by hydraulic pressure to

220 lbs

Date of test

6/7/18

No. of Certificate

12791

each boiler be worked separately

yes

Area of fire grate in each boiler

99 ft²

No. and Description of Safety Valves to

boiler

3

Spring loaded

Area of each valve

11' 0"

Pressure to which they are adjusted

220 lbs

Are they fitted with easing gear

yes

least distance between boilers or uptakes and bunkers or woodwork

about 2' 0"

Mean dia. of boilers

13' 3"

Length

21' 6"

Material of shell plates

steel

thickness

3/32" to 1/2"

Range of tensile strength

28,500 to 32,000

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

lap

3"

seams

butt

Diameter of rivet holes in long. seams

3/8"

Pitch of rivets

9"

centages of strength of longitudinal joint

rivets

89.7

plate

55.5

Working pressure of shell by rules

220

Size of manhole in shell

16" x 12"

of compensating ring

30 1/2" x 30 1/2" x 1 1/4"

No. and Description of Furnaces in each boiler

6

Deighton

Material

steel

Outside diameter

40 1/2"

th of plain part

top

bottom

Thickness of plates

crown

working pressure of furnace by the rules

220

Combustion chamber plates: Material

steel

Thickness: Sides

25"

Back

3"

Top

25"

Bottom

25"

Working pressure by rules

220

Material of stays

steel

Diameter at smallest part

2 1/4"

Area supported by each stay

95"

Working pressure by rules

220

End plates in steam space

Material of stays

steel

Thickness

1 1/4"

Pitch of stays

7 1/2" x 17 1/2"

How are stays secured

2 nuts

Working pressure by rules

220

Material of stays

steel

Diameter at smallest part

7 1/4"

Area supported by each stay

337"

Working pressure by rules

221

Material of Front plates at bottom

steel

Thickness

1 1/2"

Material of Lower back plate

Diameter

2 1/2"

Pitch of tubes

3 1/2" x 3 1/2"

Material of tube plates

steel

Thickness: Front

15"

Back

25"

Mean pitch of stays

9.09"

across wide water spaces

13"

Working pressures by rules

220

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 1/2" x 8 1/2"

Length as per rule

34"

working pressure by rules

220

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

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

stiffened with

WEB
FRAMES, In
No. of Side
FRAMES, In
FRAMES, In
No. of Side
Size of Face
KET PLAT
Frames, dep
KHEADS.
KHEADS
LISION,
TION
FUDINAL,
outside Plate
Sluice Valves
TRAKES.
ATE KEEL
ed, state H
ED or A St
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IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— *2 top end bolts & nuts & bottom end bolts & nuts, 2 main beams bolts & nuts, 1 set of coupling bolts & nuts, feed & helge for valves & seats, iron bolts & nuts assorted, 2 propeller blades & studs & nuts for air pump piston & pump rod etc*

The foregoing is a correct description,

David Rowan & Co Ltd

Manufacturer.

Dates of Survey while building
During progress of work in shops - *1913 Jan 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 31, Feb 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Mar 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Apr 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, May 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Jun 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Jul 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Aug 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Sep 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Oct 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Nov 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Dec 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29*
During erection on board vessel - *1914 Jan 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Feb 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Mar 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Apr 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, May 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Jun 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Jul 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Aug 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Sep 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Oct 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Nov 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, Dec 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29*
Total No. of visits *108*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *12/2/14* Slides *12/2/14* Covers *12/2/14* Pistons *12/2/14* Rods *12/2/14*
Connecting rods *12/2/14* Crank shaft *9/10/17* Thrust shaft *9/10/17* Tunnel shafts *10/1/18* Screw shaft *4/12/17* Propeller *23/1/18*
Stern tube *23/1/17* Steam pipes tested *14/2/18* Engine and boiler seatings *4/1/18* Engines holding down bolts *21/2/18*
Completion of pumping arrangements *26/3/18* Boilers fixed *7/3/18* Engines tried under steam *28/3/18*
Main boiler safety valves adjusted *25/3/18* Thickness of adjusting washers *P.A. 3/8 CA. 3/8 S.A. 3/8 2 3/8 CF 3/8 2 3/8*
Material of Crank shaft *Steel* Identification Mark on Do. *652 2nd 9/10/17* Material of Thrust shaft *Steel* Identification Mark on Do. *653 2nd 9/10/17*
Material of Tunnel shafts *Steel* Identification Marks on Do. *2nd 10/1/18* Material of Screw shafts *Iron* Identification Marks on Do. *715 2nd 10/1/18*
Material of Steam Pipes *lap welded iron* Test pressure *600 lbs*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F. *yes*
Have the requirements of Section 49 of the Rules been complied with *yes*
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 & boiler have been built under special survey, the material & workmanship are of good description, they have been well fitted on board and tried under steam.

This machinery is in our opinion eligible to registration of + L.M.C. 3-18 (in red) & carrying oil fuel F.P. above 150°F in double bottom & deep tank.

Oil fuel is carried in double bottom and deep tanks except under engines & boilers, the arrangements are in accordance with special dated 20/7/17 (except where since altered).

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 3.18.
3DB.(FD) & 1 AUX. SB.

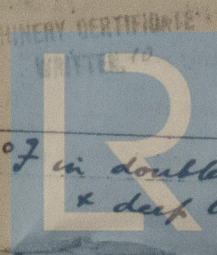
The amount of Entry Fee ... £ 3 :
Special *50* ... £ 64 : 8 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *3.11.1918*
When received, *8.11.1918*

A. McKeand & Wm. H. Capeman
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute *GLASGOW 9 APR 1918*

Assigned + L.M.C. 3.18

Carrying oil fuel F.P. above 150°F in double bottom & deep tank.



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