

Rpt. 4.

REPORT ON MACHINERY.

No. 45430
13 MAY 1926

Received at London Office

Date of writing Report

19

When handed in at Local Office

17-2-26

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 26th Mar 1924 Last Survey

8-2-

1926

on the

S S Q U E R C U S

(Number of Visits 40)

Master

Built at Port Glasgow

By whom built

Dunlop Bremner & Co. Ltd (350)

When built

Gross 2694

Net 2539.

Engines made at

Glasgow

By whom made

D. Rowan & Co. Ltd (No 796)

when made

1926

Boilers made at

Glasgow

By whom made

D. Rowan & Co. Ltd (No 796)

when made

1926

Registered Horse Power

Owners Anchor Shipping Company Ltd.

Port belonging to London

Nom. Horse Power as per Section 28

250

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

22" 36" 59"

Length of Stroke

39"

Revs. per minute

Dia. of Screw shaft

12.26"

Material of

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes No O.G. 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 yes If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 4'-3"

Dia. of Tunnel shaft

as per rule 10.85" 10.72"

Dia. of Crank shaft journals

as per rule 11.39" 11.25"

Dia. of Crank pin

11.2"

Size of Crank webs

17 1/2 x 7 1/2"

collars

11 3/4"

Dia. of screw

16'-0"

Pitch of Screw

16'-0"

No. of Blades

4

No. of Feed pumps

2

Diameter of ditto

3 1/4"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

SIZES OF PUMPS

8 1/2 x 8

8 1/2 x 8

6 1/2 x 6

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

In Engine Room

In Holds, &c.

No. of Bilge Injections

sises

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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record (S))

Manufacturers of Steel Plate & Steel Co. Ltd. Wm. Beardmore & Co. Ltd. Lanarkshire Steel Co. Ltd.

Total Heating Surface of Boilers 4062 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

two single ended

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

19-9-24

No. of Certificate

16609

Can each boiler be worked separately

yes

Area of fire grate in each boiler

58.75 sq ft

No. and Description of Safety Valves to

each boiler

two direct spring

Area of each valve

7.06 sq in

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boiler or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

15'-0"

Length

10'-6"

Material of shell plates

steel

Thickness

1 1/2"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

long. seams

DRS TR

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/2"

Lap of plates or width of butt straps

18 3/4"

Per centages of strength of longitudinal joint

rivets 87

plate 86

Working pressure of shell by rules

180

Size of manhole in shell

19 1/2 x 15 1/2"

Size of compensating ring

2'-10" x 2'-6" x 1 1/2"

No. and Description of Furnaces in each boiler

3 Deighton

Material

steel

Outside diameter

3'-7 3/4"

Length of plain part

top 3'-10"

Thickness of plates

crown 3 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

181

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/2"

Back

3 1/2"

Top

1 1/2"

Bottom

1 1/2"

Pitch of stays to ditto: Sides

8 1/2 x 10 1/2"

Back

8 1/2 x 10 1/2"

Top

8 1/2 x 10 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180

Material of stays

steel

Area at smallest part

15"

Area supported by each stay

85.30"

Working pressure by rules

180 lbs

End plates in steam space:

Material

steel

Thickness

1 1/4"

Pitch of stays

19 x 21"

How are stays secured

DN

Working pressure by rules

182

Area at smallest part

3 1/2 x 2 1/2"

Area supported by each stay

412.3530"

Working pressure by rules

185

Material of Front plates at bottom

steel

Thickness

3 1/2"

Material of Lower back plate

steel

Thickness

3 1/4"

Greatest pitch of stays

13 1/2 x 8 3/4"

Working pressure of plate by rules

183

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2 x 4 3/8"

Material of tube plates

steel

Thickness: Front

27"

Back

23"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

180

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

2 @ 9 x 1 1/8"

Length as per rule

33 5/8"

Working pressure by rules

186

Steam dome: description of joint to shell

none

% 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 none

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

N1139-0055

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? -

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

For David Rowan & Co Ltd
Arch^d N. Grierson

Manufacturer.

Dates of Survey while building
During progress of work in shops - - 1924 Mar 26 May 14 28 June 2 11 16 23 30 July 9 10 15 30 Aug 4 11 12 22 24 Sep 1 5 12 15 19 26
During erection on board vessel - - - Oct 1 2 7 16 20 21 24 26 Dec 15 (1925) Jan 12 20 Feb 9 Aug 4 Sep 4 (1926) Feb 4 8
Total No. of visits 40

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 19-9-24 Slides 24-10-24 Covers 19-9-24 Pistons 24-10-24 Rods 24-10-24

Connecting rods 24-10-24 Crank shaft 26-9-24 Thrust shaft 15-12-24 Tunnel shafts 24-10-24 Screw shaft 15-12-24 Propeller 15-12-24

Stern tube 24-10-24 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

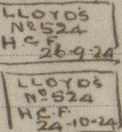
Screw shaft and propeller

Main boiler safety valves adjusted

Thickness of adjusting washers

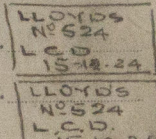
Material of Crank shaft *Steel*

Identification Mark on Do.



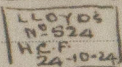
Material of Thrust shaft *Steel*

Identification Mark on Do.



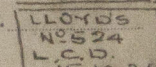
Material of Tunnel shafts *Steel*

Identification Marks on Do.



Material of Screw shafts *Steel*

Identification Marks on Do.



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 machinery has been sent to Port Glasgow to be fitted in the vessel. Surveyors advised.

The materials and workmanship are good.

The machinery has been constructed under Special Survey in accordance with the Rules and will be eligible in my opinion for classification and the Pierre + LMC (with date) when it has been satisfactorily fitted in the vessel

The amount of Entry Fee ... £ 4 :-

Special due 9th 4 fee £ 50 :-

Donkey Boiler Fee ... £ 12 10

Travelling Expenses (if any) £ :-

When applied for.

10/5/26

When received.

12/5/26

For H. C. Foster & Self

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

Assigned

See Gen. Rpt. To 18539

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