

REPORT ON MACHINERY.

No. 83641

Received at London Office

26-10-20

Writing Report

19

When handed in at Local Office

19

Port of

Spawick

Survey held at

Book.

Great Yarmouth

Date, First Survey

5th March 1919

Last Survey

5th Oct

1920.

on the

Steel Screw Lug "St. Aristell" (Rescue Type)

(Number of Visits 45)

Tons

Gross

Net

Built at

Go Yarmouth

By whom built

Crabtree & Co Ltd

N^o 175

When built

1920

es made at

Go Yarmouth

By whom made

Crabtree & Co Ltd

N^o 568

when made

1920.

s made at

Stockton

By whom made

Riley Bros Ltd

N^{os} 5167

5168

when made

1919

Fitted 1920

tered Horse Power

Owners

Admiralty

Port belonging to

London

Horse Power as per Section 28

208

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes.

INES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

of Cylinders

18 $\frac{1}{4}$ "-28 $\frac{1}{2}$ "-48 $\frac{1}{2}$ "

Length of Stroke

28"

Revs. per minute

Dia. of Screw shaft

as per rule 9.64"

Material of

Steel

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

No liner

Is the after end of the liner made water tight

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

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

If two

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

Length of stern bush

42"

Tunnel shaft

as per rule 8.52"

Dia. of Crank shaft journals

as per rule 8.95"

Dia. of Crank pin

9"

Size of Crank webs

16 $\frac{1}{4}$ "-6 $\frac{1}{8}$ "

Dia. of thrust shaft under

9"

Dia. of screw

10-7"

Pitch of Screw

12-0"

No. of Blades

4

State whether moveable

No

Total surface

34 $\frac{1}{2}$

Feed pumps

two

Diameter of ditto

3 $\frac{1}{8}$ "

Stroke

13 $\frac{1}{2}$ "

Can one be overhauled while the other is at work

Yes.

Bilge pumps

two

Diameter of ditto

3 $\frac{1}{8}$ "

Stroke

13 $\frac{1}{2}$ "

Can one be overhauled while the other is at work

Yes.

Donkey Engines

two 2 $\frac{1}{2}$ "

Sizes of Pumps

G.S. 6 $\frac{1}{2}$ "-4 $\frac{1}{2}$ "-6" Duplex

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

One 2 $\frac{1}{2}$ " in Engine Room, One 2 $\frac{1}{2}$ " Boiler room

In Holds, &c. One 3" in fore & after peaks, & one 3" in

each compartment. All Suctions connected to Ejector & operated from deck.

Bilge Injections

one sizes 6"

Connected to condenser, or to circulating pump

c.p.p.

Is a separate Donkey Suction fitted in Engine room & size

Yes 3 $\frac{1}{2}$ "

the bilge suction pipes fitted with roses

Yes

Are the roses in Engine room always accessible

Yes

Are the sluices on Engine room bulkheads always accessible

None

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

Yes

Are they Valves or Cocks

Both

Are the Discharge Pipes above or below the deep water line

above

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

Yes

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

Yes

Are the Discharge Pipes above or below the deep water line

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

Aux exhaust to atmosphere

How are they protected

Lagged & Iron casing

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

Yes

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

Yes

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Yes

ERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Messrs J. Spencer & Sons

Heating Surface of Boilers

3384

Is Forced Draft fitted

Yes

No. and Description of Boilers

Two Single Ended

ing Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

9-9-19

No. of Certificate

6029

ach boiler be worked separately

Yes

Area of fire grate in each boiler

43.5 $\frac{1}{2}$

No. and Description of Safety Valves to

Two Spring Loaded

Area of each valve

7.06

Pressure to which they are adjusted

183 lbs

Are they fitted with easing gear

Yes

st distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

Length

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

ntages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

No. and Description of Furnaces in each boiler

Material

Outside diameter

compensating ring

top

Thicknes of plates

Description of longitudinal joint

No. of strengthening rings

bottom

ing pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

ial

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

ness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

king pressure by rules

Stays dome: description of joint to shell

% of strength of joint

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

ERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

of Test

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

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

No 10497

No 10497

No 10497

No 10497

No 10497

No 10497

No 10497

No 10497

No 10497

No 10497

No 10497

012501-012507-0073

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IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 2 con rod top end, 2 con rod bottom end bolts
2 main bearing bolts & nuts, 1 pair eccentric strap bolts & nuts. 6 couple
bolts & nuts. 2 bilge & 2 feed pump valves. 2 cwt of assorted bolts &
iron of various sizes. 2 safety valve springs. 1 air pump rod. 1 set of spring
rings for each piston. 4 escape valve springs. 24 plain & 4 stay
tubes, 1 set of white metal thrust faces complete. Eccentric rod & strap One
main bearing brasses. etc

The foregoing is a correct description,

CHASTREE & CO., LTD.

J. A. Chamberlain.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1919) May 5-11 Apr 1-11-20 May 3-13 June 6-12-25 July 2 Aug 13-21 Sep 12-22-25-31 Nov 12-20-26 Dec 31
(1920) Jan 8-14 Feb 6-19-20-21-27 March 2-5-12-25 Apr 9 May 6 June 20 July 1-15-26 Sep 7-20-21-23-24-29 Oct 5
During erection on board vessel - - -
Total No. of visits 45.

Is the approved plan of main boiler forwarded herewith? ✓

Dates of Examination of principal parts—Cylinders 2-7-19 31-10-19 Slides 20-11-19 Covers 13-5-19 31-5-19 Pistons 13-5-19 31-5-19 Rods 13-5-19 31-5-19
Connecting rods 25-6-19 31-10-19 Crank shaft ✓ Thrust shaft 13-9-19 31-10-19 Tunnel shafts 31-10-19 Screw shaft 2-7-19 12-9-19 Propeller 26-1-20
Stern tube 23-9-19 26-1-19 Steam pipes tested Part 80-6-20 Engine and boiler seatings 26-11-19 Engines holding down bolts 6-5-20
Completion of pumping arrangements 23-9-20 Boilers fixed 6-5-20 Engines tried under steam 23-9-20
Completion of fitting sea connections 8-1-20 Stern tube 8-1-20 Screw shaft and propeller 8-1-20
Main boiler safety valves adjusted 23-9-20 Thickness of adjusting washers For P 1 1/2" S 1 1/2" AFT P 1 1/2" S 1 1/2"

Material of Crank shaft Steel Identification Mark on Do. 4865-JRW Material of Thrust shaft Steel Identification Mark on Do. 27

Material of Tunnel shafts Steel Identification Marks on Do. 14 A67 Material of Screw shafts Steel Identification Marks on Do. 46

Material of Steam Pipes Steel & Copper

Test pressure Open water & tested at Birmingham & N

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 Yes If so, state name of vessel Rescue Tugs.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel

has been built under Special Survey, the materials and workmanship are good. The Engines & Boilers were examined whilst being installed in vessel, afterwards tried under full working conditions, and found satisfactory

The machinery of this vessel is in a good & efficient condition & eligible in our opinion to be classed with the record L.M.C. 10-20 in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 10.20 FD

R M 95
28/10/20

The amount of Entry Fee ... £ : : When applied for, 26 OCT 1920 To Admiralty
Special Res 13/4 fi £ 64 = 16 = 0
Donkey Boiler Fee ... £ 53 : 10 : 4 When received, 15-12-19 20 7/10
Travelling Expenses (if any) £ : : 15-12-19 20 7/10

Committee's Minute FRI. OCT. 29 1920

Assigned + L.M.C. 10.20

F.D.

CERTIFICATE WRITTEN



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