

REPORT ON MACHINERY.

No. 72465

Received at London Office 19 3 10

Date of writing Report

19

When handed in at Local Office

19/3/10

19/0 Port of

London

To. in Survey held at

Yarmouth

Date, First Survey

21st April '09

Last Survey

17/3/10

Reg. Book.

(Number of Visits)

115

on the

Machinery of S. tug Consort

Tons

Gross

115

Net

Master

Built at

Howdon

By whom built

J. Seary & Son

When built

1910

Engines made at

Yarmouth

By whom made

Crabbie & Co Ltd

when made

1910-3

Boilers made at

Stockton

By whom made

Riley Bros

when made

1909

Registered Horse Power

Owners

J. Constant

Port belonging to

nom. Horse Power as per Section 28

51

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

Engines, &c.—Description of Engines

Compound Surface Condensing

No. of Cylinders

two

No. of Cranks

two

Dia. of Cylinders

15" & 30"

Length of Stroke

20"

Revs. per minute

115

Dia. of Screw shaft

as per rule

6.68"

Material of

steel

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

no liners

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

✓

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

no liners

Length of stern bush

30"

Dia. of Tunnel shaft

as per rule

5.82"

Dia. of Crank shaft journals

as per rule

6.11"

Dia. of Crank pin

6.12"

Size of Crank webs

4" x 8 1/4"

Dia. of thrust shaft under

collars

6 1/2"

Dia. of screw

7-6"

Pitch of Screw

10'-6"

No. of Blades

3

State whether moveable

no

Total surface

21 ft

No. of Feed pumps

one

Diameter of ditto

2 1/4"

Stroke

10"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

one

Diameter of ditto

2 1/4"

Stroke

10"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

one double ended

Sizes of Pumps

Bilge 3"

Feed 2 1/4"

Stroke 6"

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

In Engine Room

one

2" dia

In Holds, &c.

one in each compartment

2" dia

No. of Bilge Injections

one

sizes

3"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes 2"

Are all 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

Are 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 stokehold plates

yes

Are the Discharge Pipes above or below the deep water line

above

Are 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

What pipes are carried through the bunkers

Main steam pipe

How are they protected

Steel casing

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

yes

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

yes

Dates of examination of completion of fitting of Sea Connections

10/2/10

of Stern Tube

10/2/10

Screw shaft and Propeller

10/2/10

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

✓

worked from

✓

Boilers, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

1050

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

120 lbs

Tested by hydraulic pressure to

Date of test

No. of Certificate

4281

Can each boiler be worked separately

✓

Area of fire grate in each boiler

38.5 ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

4.9 ft

Pressure to which they are adjusted

125 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers

on woodwork

6' 6" bilge lap

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

Percentage of strength of longitudinal joint

rivets

plate

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

bottom

Thickness of plates

crown

bottom

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

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material of stays

Diameter at smallest part

How are stays secured

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Working pressure of plate by rules

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Back

Mean pitch of stays

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Depth and

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

Superheater or Steam chest; how connected to boiler

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

Thickness

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

01603-013114-0287

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description						
Made at	By whom made	When made	Where fixed				
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety		
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment			
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Dia. of donkey boiler	Length				
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams				
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets	Plates	
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays			
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint			
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by					
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey				

SPARE GEAR. State the articles supplied :— Two crosshead bolts, Two connecting rod bottom end bolts, Two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves and a quantity of assorted bolts & nuts iron of various sizes

The foregoing is a correct description,
 Manufacturer. **CRABTREE & CO., LIMITED.**

Dates of Survey while building	During progress of work in shops - -	1909 Apr 21, May 10, June 26, July 5 & 8, Sep 23, Nov 14.	Is the approved plan of main boiler forwarded herewith <i>yes</i>
	During erection on board vessel - -	1910. Feb 9, 10 & 15; March 9, 10 & 14.	
	Total No. of visits	13.	

Dates of Examination of principal parts—	Cylinders 26.6.09	Slides 26.6.09	Covers 26.6.09	Pistons 26.6.09	Rods 26.6.09
Connecting rods 26.6.09	Crank shaft 26.6.09	Thrust shaft 5.7.09	Tunnel shafts 5.7.09	Screw shaft 5.7.09	Propeller 10.2.10
Stern tube 10.2.10	Steam pipes tested 9.3.10	Engine and boiler seatings 10.2.10	Engines holding down bolts 9.3.10		
Completion of pumping arrangements 9.3.10	Boilers fixed 11.2.10	Engines tried under steam 9.3.10			
Main boiler safety valves adjusted 9.3.10	Thickness of adjusting washers $P\frac{1}{4}$ S $5\frac{1}{16}F$				
Material of Crank shaft <i>steel</i>	Identification Mark on Do. 2292 ATG	Material of Thrust shaft <i>steel</i>	Identification Mark on Do. 457 FL		
Material of Tunnel shafts <i>steel</i>	Identification Marks on Do. 456 FLS	Material of Screw shaft <i>steel</i>	Identification Marks on Do. 455 FL		
Material of Steam Pipes <i>copper</i>		Test pressure 240 lbs			

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been constructed under special survey in accordance with the rules of this Society, on completion they were properly fitted on board & tried under steam with satisfactory results.
 In my opinion the vessel is eligible for the record + L.M.C. 3.10

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.10

Ad. 21.3.10. *PPH*

The amount of Entry Fee	£ 1 : 0 : 0	When applied for, 13/3/10
Special	£ 5 : 6 : 8	When received, 15.3.10
Donkey Boiler Fee	£ 3 : 5 : 4	29.12.0
Travelling Expenses (if any)	£	

Frank L. Sturgeon
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute
 Assigned
 FRI 8 APL 1910
 FRI 2 SEP 1910
 FRI 16 DEC 1910

