

## REPORT ON MACHINERY.

No. 311311

Received at London Office SAT. 4 MAR 1911

Date of writing Report 27/2/11 When handed in at Local Office

Port of London

No. in Survey held at 46 on the

Gt Yarmouth

Date, First Survey 26<sup>th</sup> July 1910Last Survey 25<sup>th</sup> Feb 1911

(Number of Visits 5)

Master

Built at

Selby

By whom built

Cochrane &amp; Sons

Tons Gross 260

Net

When built 1911

Engines made at

Yarmouth

By whom made

Crabtree &amp; Co Ltd

when made 1911-2

Boilers made at

Stockton

By whom made

Riley Bros Ltd

when made 1911

Registered Horse Power

Owners

F. W. Horlock

Port belonging to

Hull

Nom. Horse Power as per Section 28

59

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &amp;c.—Description of Engines

Triple Expansion Surface Condensing

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

11-18-30

Length of Stroke

21

Revs. per minute

Dia. of Screw shaft

as per rule 6.52

Material of

steel

Is the 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

in the propeller boss

yes

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

yes

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

yes

Length of stern bush

30"

Dia. of Tunnel shaft

as per rule 5.57

Dia. of Crank shaft journals

as per rule 5.849

Dia. of Crank pin

6"

Size of Crank webs

7 1/2" x 4 1/2"

Dia. of thrust shaft under

collars

6 1/2"

Dia. of screw

7-6"

Pitch of Screw

10'-6"

No. of Blades

4

State whether moveable

no

Total surface

22 ft

No. of Feed pumps

one

Diameter of ditto

2 1/4"

Stroke

10 1/2"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

one

Diameter of ditto

2 1/4"

Stroke

10 1/2"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

one duplex

Sizes of Pumps

4" dia. x 6" stroke

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

In Engine Room

one 2" dia.

In Holds, &amp;c.

one 2" dia. on both sides in hold

No. of Bilge Injections

one sizes 3 1/2"

Connected to condenser, or to circulating pump

pump

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

none

How are they protected

yes

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

2-2-11

of Stern Tube

1-2-11

Screw shaft and Propeller

2-2-11

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

worked from

yes

BOILERS, &amp;c.—(Letter for record 5)

Manufacturers of Steel

Total Heating Surface of Boilers

1100 ft<sup>2</sup>

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs.

Date of test

20-10-10

No. of Certificate

4520

Can each boiler be worked separately

yes

Area of fire grate in each boiler

38 1/2 ft<sup>2</sup>

No. and Description of Safety Valves to

each boiler

two springs loaded

Area of each valve

4.9 ft<sup>2</sup>

Pressure to which they are adjusted

185 lbs.

Are they fitted with easing gear

yes

Smallest distance between boilers on uptakes and bunkers

10" boiler lapped

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Length

Material of shell plates

Descrip. of riveting: cir. seams

Lap of plates or width of butt straps

Size of manhole in shell

Percentages 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

bottom

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

Pitch of stays to ditto: Sides

Back

Top

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Working pressure of plate by rules

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Material of stays

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Girders to Chamber tops: Material

Depth and

Pitch across wide water spaces

Working pressures by rules

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

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

Lloyd's Register

W856-0187



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	When made	Where fixed
Made at	By whom made		
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
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
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by	Dates of survey
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	

SPARE GEAR. State the articles supplied:— Two top end bolts, Two bottom end bolts, Two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves, a quantity of bolts & nuts & iron of various sizes, six condenser tubes, 3 plain boiler tubes, 6 junk ring bolts & one safety valve spring

The foregoing is a correct description,

Manufacturer.

Dates of Survey: 1910: Jan 26, Aug 22, Sept. 6, 11, 16, 30, Oct. 27, Dec 20, (1911) Jan 3, Feb 15. 1911: Feb 6, 8, 17, 25. Total No. of visits 15. Is the approved plan of main boiler forwarded herewith no

Dates of Examination of principal parts—Cylinders 6-9-10 Slides 6-9-10 Covers 6-9-10 Pistons 6-9-10 Rods 6-9-10 Connecting rods 6-9-10 Crank shaft 27-7-10 Thrust shaft 20-9-10 Tunnel shafts ✓ Screw shaft 6-9-10 Propeller 1-2-11 Stern tube 3-1-11 Steam pipes tested (Hall) 2-11 Engine and boiler seatings 1-2-11 Engines holding down bolts 17-2-11 Completion of pumping arrangements 25-2-11 Boilers fixed 17-2-11 Engines tried under steam 25-2-11 Main boiler safety valves adjusted 25-2-11 Thickness of adjusting washers P9/32 S 1/4 Material of Crank shaft ✓ Identification Mark on Do. 30/5/10 Material of Thrust shaft steel Identification Mark on Do. 146 F.L. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts steel Identification Marks on Do. 145 F.L. Material of Steam Pipes copper ✓ Test pressure 400 lbs per sq. in.

General Remarks (State quality of workmanship, opinions as to class, &c. These engines were partly constructed in 1906. They have been totally dismantled, cylinders, condenser & pumps tested all parts thoroughly examined & found good. The shafting has been tested as required by the rules & the engines reconstructed under survey; the material & workmanship are good; on completion they were properly fixed on board & the vessel satisfactorily tried under steam. In my opinion the machinery of this vessel is eligible for the record & L.M.C. 2-11.

It is submitted that this vessel is eligible for THE RECORD, + L.M.C. 2-11.

JWD 7/3/11

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

The amount of Entry Fee .. £ 1 : 0 :  
Special .. £ 5 : 18 :  
Donkey Boiler Fee .. £ 1 : 0 :  
Travelling Expenses (if any) £ 3 : 0 :  
When applied for, 14 Mar 1911  
When received, 27.3.1911

Committee's Minute  
Assigned  
TUE. 7 MAR 1911  
+ L.M.C. 2-11