

Date of writing Report

19

When handed in at Local Office

10-12-10/12 Port of

Hull

No. in Survey held at  
Reg. Book.

Hull

Date, First Survey

Sep. 2<sup>nd</sup>

Last Survey

Dec. 3<sup>rd</sup> 1912

(Number of Visits 35)

34 Tons on the

steel screw tug Redoubt

Master

Built at

Lebb

By whom built

Cochrane &amp; Sons

When built

1912-12

Engines made at

Hull

By whom made

Cochrane &amp; Sons

when made

1912-12

Boilers made at

Hull

By whom made

Cochrane &amp; Sons

when made

1912-12

Registered Horse Power

Owners

J. Constant

Port belonging to

Odessa

Nom. Horse Power as per Section 28

46

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

## ENGINES, &amp;c.—Description of Engines

Compound Surface Condensing

No. of Cylinders

two

No. of Cranks

two

Dia. of Cylinders

15" - 30"

Length of Stroke

18"

Revs. per minute

130

Dia. of Screw shaft

as per rule 6.74"

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

✓

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

✓

Length of stern bush

27"

Dia. of Tunnel shaft

as per rule 5.91"

Dia. of Crank shaft journals

as per rule 6.21"

Dia. of Crank pin

6 1/4"

Size of Crank webs

12" x 4 1/2"

Dia. of thrust shaft under

collars

6 1/4"

Dia. of screw

7-6"

Pitch of Screw

9'-0"

No. of Blades

3

State whether moveable

no

Total surface

24 ft

No. of Feed pumps

one

Diameter of ditto

2 1/2"

Stroke

7 1/2"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps

one

Diameter of ditto

2 1/2"

Stroke

7 1/2"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines

one duplex

Sizes of Pumps

5 1/4" - 3 1/2" x 5"

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

In Engine Room one 2" dia in S.R. &amp; one 2" in Bilge room

In Holds, &amp;c. one 2" in Fore hold, one 2" in FW

No. of Bilge Injections

one

size

3"

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

✓

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

13-11-12

of Stern Tube

13-11-12

Screw shaft and Propeller

30-11-12

Is the Screw Shaft Tunnel watertight

✓

Is it fitted with a watertight door

worked from

✓

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

Manufacturers of Steel

Steel Co. of Scotland

Total Heating Surface of Boilers

875 ft<sup>2</sup>

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

140 lbs

Tested by hydraulic pressure to

280 lbs

Date of test

8-11-12

No. of Certificate

1940

Can each boiler be worked separately

✓

Area of fire grate in each boiler

36.8 sq ft

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

4.9"

Pressure to which they are adjusted

142

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

6" brick lagged

dia. of boilers

126"

Length

10'-0"

Material of shell plates

steel

Thickness

3/4"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

D.R.D.B.

Diameter of rivet holes in long. seams

1"

Pitch of rivets

5 1/16"

Lap of plates or width of butt straps

10 3/4"

Per centages of strength of longitudinal joint

rivets 82.2

plate 82.4

Working pressure of shell by rules

143

Size of manhole in shell

15" x 19"

Size of compensating ring

8 1/2" x 15 1/16"

No. and Description of Furnaces in each boiler

two plain

Material steel

Outside diameter

38 1/4"

Length of plain part

top 8 3/4"

bottom 11 1/2"

Thickness of plates

crown 3/4"

bottom 3/4"

Description of longitudinal joint

welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

141

Combustion chamber plates: Material

steel

Thickness: Sides

3/4"

Back

5/8"

Top

2/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

11" x 7 1/2"

Back

10 1/4" x 9"

Top

12" x 7 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

145

Material of stays

steel

Diameter at smallest part

1 1/4"

Area supported by each stay

82.5"

Working pressure by rules

143

End plates in steam space:

Material

steel

Thickness

27/32"

Pitch of stays

5" x 1 1/4"

How are stays secured

D. R.

Working pressure by rules

144

Material of stays

steel

Diameter at smallest part

3 3/16"

Area supported by each stay

221"

Working pressure by rules

158

Material of Front plates at bottom

steel

Thickness

27/32"

Material of Lower back plate

steel

Thickness

27/32"

Greatest pitch of stays

14" x 9"

Working pressure of plate by rules

178 lbs

Diameter of tubes

3"

Pitch of tubes

4 1/4" x 4 1/8"

Material of tube plates

steel

Thickness: Front

27/32"

Back

3/4"

Mean pitch of stays

10 5/8"

Pitch across wide water spaces

14"

Working pressures by rules

148

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7 1/2" x 1 1/2"

Length as per rule

27"

Distance apart

12"

Number and pitch of stays in each

two 7 1/2"

Working pressure by rules

142

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

✓

holes

✓

Pitch of rivets

✓

Working pressure of shell by rules

✓

Diameter of flue

✓

Material of flue plates

✓

Thickness

✓

How stayed



# 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 ribet 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 \_\_\_\_\_ Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_

Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & blp pump valves, a quantity of bolts & nuts & iron of various sizes.*

FOR EARLE'S

SHIPBUILDING & ENGINEERING CO. LIMITED.

The foregoing is a correct description, *9.18*

*F. J. Salethorpe*

Manufacturer.

SECRETARY.

Dates of Survey while building { During progress of work in shops - - { *1912 - Sep 2, 10, 18, 19, 23, 24, 27, 30, Oct 2, 3, 7, 8, 15, 17, 18, 21, 23, 25, 29, 31, Nov 1, 2, 6, 7, 8.*

{ During erection on board vessel - - { *Nov 11, 12, 13, 14, 22, 25, 27, 29, 30 Dec 3.*

Total No. of visits *35*

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *3/10-12* Slides *3/10-12* Covers *3/10-12* Pistons *3/10-12* Rods *23-9-12*

Connecting rods *10-9-12* Crank shaft *7-11-12* Thrust shaft *7-11-12* Tunnel shafts *23-9-12* Screw shaft *23-9-12* Propeller *30-11-12*

Stern tube *13-11-12* Steam pipes tested *27-11-12* Engine and boiler seatings *11-11-12* Engines holding down bolts *27-11-12*

Completion of pumping arrangements *27-11-12* Boilers fixed *27-11-12* Engines tried under steam *3-12-12*

Main boiler safety valves adjusted *3-12-12* Thickness of adjusting washers *Pat 1/32 Start 9/16*

Material of Crank shaft *steel* Identification Mark on Do. *1009FL8* Material of Thrust shaft *Pat 9/16* Identification Mark on Do. \_\_\_\_\_

Material of Tunnel shafts *steel* Identification Marks on Do. *1008FL8* Material of Screw shafts *steel* Identification Marks on Do. *1002FL8*

Material of Steam Pipes *copper* Test pressure *30 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery of this vessel has been constructed under special survey in accordance with the approved plan & the rules of this Society, the materials & workmanship are good, the boiler has been tested by hydraulic pressure to 20 lbs & found sound & tight. The machinery has been properly fitted & run on board & on completion was tested under steam & found satisfactory. The safety valves have been adjusted to 142 lbs tested for accumulation & found satisfactory. In my opinion the vessel is eligible for the record & L.M.C. 12-12.*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 12.12

*GPR*

*JWR 11/12/12*

*Frank L. Stanger*

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

The amount of Entry Fee £ *1 : 0 :*

Special £ *8 : 0 :*

Donkey Boiler Fee £ *:*

Travelling Expenses (if any) £ *:*

When applied for, *10-12-12*

When received, *10.1.13*

Committee's Minute

FRI. DEC. 13. 1912

Assigned

*Thme 12.12*



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Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)