

Received at London Office

MON. FEB. 1 - 1915

Date of writing Report 25th Jan. 1915 When handed in at Local Office25-1-1915 Port of Hull

No. in Survey held at

Hull

Date, First Survey

10-6-14

Last Survey

21. 1.

1913

Reg. Book

(Number of Vols)

42

Master

Built at

Dundee

By whom built

Dundee L.B. Co

Engines made at

Hull

By whom made

Charles & Co Ltd (H.A. 187)

when made

1915-1

Boilers made at

Hull

By whom made

Charles & Co Ltd

when made

1915-1

Registered Horse Power

Owners

M. A. Ray & Sons

Port belonging to

London

Nom. Horse Power as per Section 28

110

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

15" - 25" - 41"

Length of Stroke

27"

Revs. per minute

Dia. of Screw shaft

as per rule 8.91

Material of

steel

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

no

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

yes

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

no liner fitted

Length of stern bush

3'-0"

Dia. of Tunnel shaft

as per rule 7.47

Dia. of Crank shaft journals

as per rule 7.84

Dia. of Crank pin

7 7/8"

Size of Crank webs

15 1/2" x 5 1/2"

Dia. of thrust shaft under

collars

7 7/8"

Dia. of screw

10'-6"

Pitch of Screw

12'-0"

No. of Blades

4

State whether moveable

no

Total surface

38 ft²

No. of Feed pumps

Two

Diameter of ditto

2 1/4"

Stroke

1 ft

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

Two

Diameter of ditto

2 1/4"

Stroke

1 ft

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

Two

Sizes of Pumps

6" 1/2" 6" 1/2" 6" 1/2"

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

5 1/2" 3 1/2" 1 1/2" 1 1/2"

In Engine Room

2-2" Bilge Suctions

In Holds, &c.

2-2" Bilge Suctions in main

No. of Bilge Injections

four

sizes

3 1/2"

Connected to

condenser

or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes 2 1/2"

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

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

4-1-14

of Stern Tube

4-1-14

Screw shaft and Propeller

4-1-14

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

yes

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Steel Co of Scotland

Total Heating Surface of Boilers

915 ft²

Is Forced Draft fitted

no

No. and Description of Boilers

one single under

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

20-10-14

No. of Certificate

3031

Can each boiler be worked separately

yes

Area of fire grate in each boiler

57 3/4 sq ft

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

5.99 sq in

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

9"

Mean dia. of boilers

17 1/4"

Length

10'-6"

Material of shell plates

steel

Thickness

3/16"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

7 R.D.B. 1

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 7/8"

Lap of plates

width of butt straps1 ft 3/4"

Per centages of strength of longitudinal joint

rivets 86.8

plate

86.9

Working pressure of shell by rules

184

Size of manhole in

end16" x 12"

Size of compensating ring

plate flanged

No. and Description of Furnaces in each boiler

3

Plain

Material

S

Outside diameter

43 7/8"

Length of plain part

top 81 1/2"

Thickness of plates

bottom 78"

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

186

Combustion chamber plates: Material

S

Thickness: Sides

1 1/16"

Back

2 1/32"

Top

1 1/16"

Pitch of stays to ditto: Sides

9 1/2" x 9 1/2"

Back

9 1/2" x 9 1/2"

Top

9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

181

Material of stays

S

Diameter at smallest part

1 7/16"

Area supported by each stay

7 ft²

Working pressure by rules

184

End plates in steam space

yes

Material

S

Thickness

1 7/32"

Pitch of stays

9 1/2" x 1 ft 1/2"

How are stays secured

R. N.

Working pressure by rules

187

Diameter at smallest part

6 23/32"

Area supported by each stay

356 ft²

Working pressure by rules

182

Material of Front plates at bottom

S

Thickness

1 1/16"

Material of Lower back plate

S

Thickness

1 3/16"

Greatest pitch of stays

13 1/2" x 1 ft 1/2"

Working pressure of plate by rules

182

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

S

Thickness: Front

1 5/16"

Back

1 3/16"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

185 lbs

Girders to Chamber tops: Material

S

Depth and

yes

thickness of girder at centre

9" x 1 1/2"

Length as per rule

32 2 1/2"

Distance apart

9 1/2"

Number and pitch of stays in each

Two9 1/2"

Working pressure by rules

183

Superheater or Steam chest: how connected to boiler

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *see separate report - inside*

SPARE GEAR. State the articles supplied:—

2 Connecting rod top & bottom end bolts
2 main bearing bolts & nuts
1 Set of coupling bolts & nuts
1 Set of feed pump valves
1 Set of bilge pump valves
30 Condenser ferrules
3 Condenser tubes
24 Condenser lugs & packings
6 pump ring bolts
1 Set of air pump valves
Quantity of assorted bolts & nuts
1 Set of circulating pump valves
1 set of Donkey pump valves
fire bars for both furnaces
1 main check valve
1 Donkey check valve
6 Boiler tubes & nuts
1 Safety valve spring
Spare propeller

The foregoing is a correct description.

FOR EARLE'S
SHIPBUILDING & ENGINEERING CO. LIMITED

Manufacturer.

Dates of Survey while building
During progress of work in shops - - 1914: - Jun 10. 19. 22. 25. 30 July 6. 10. 15. 28 Aug 10. 13. 14. 17. 19. 21. 26. 27 Sep 3. 10
During erection on board vessel - - - 11. 18. 25. 30. Oct 6. 8. 13. 19 20. 22. 28 Nov 2. 24. Dec 7. 12. 30. 31 1915 Jan 2. 4. 8. 13. 20
Total No. of visits 42

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 10-9-14 Slides 10-9-14 Covers 10-9-14 Pistons 17-8-14 Rods 17-8-14

Connecting rods 21-8-14 Crank shaft 21-8-14 Thrust shaft 28-10-14 Tunnel shafts ✓ Screw shaft 28-10-14 Propeller 28-10-14

Stern tube 31-12-14 Steam pipes tested 20.1.15. Engine and boiler seatings 31-12-14 Engines holding down bolts 13.1.15.

Completion of pumping arrangements 20.1.15. Boilers fixed 13.1.15. Engines tried under steam 21.1.15.

Main boiler safety valves adjusted 21.1.15. Thickness of adjusting washers SV $\frac{3}{8}$ " PV $\frac{7}{16}$ "

Material of Crank shaft *Steel* Identification Mark on Do. 1264 FLS Material of Thrust shaft *Steel* Identification Mark on Do. 1357 FLS

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Steel* Identification Marks on Do. 1355 FLS

Material of Steam Pipes *Steel* Test pressure 540 lbs. hyd. press.

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 *no* If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound & good. The boiler tested by hydraulic pressure and with the engines secured on board started under steam. They are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of +LMC 1.15. in the Register book.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 1.15

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 16 : 10 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 30-1-1915
When received, 11/2/15

Committee's Minute FRI. FEB. 5-1915

Assigned

Deferred

Frank A. Stanger J. G. MacKillop
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

FRI. FEB. 26. 1915



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Foundation