

REPORT ON MACHINERY

No. 28296

JULY 23, 1915

Date of writing Report

19

When handed in at Local Office

20/2/15 Port of

Received at London Office

Hull

No. in Survey held at
Reg. Book.

Date, First Survey

25-7-14

Last Survey

12-2-1915

APP. 46 on the

S. T. MARNE.

(Number of Visits)

48

Gross 257

Net 103

Master

Built at

Hull

By whom built

Livingstone & Cooper Ltd

When built

Engines made at

Hull

By whom made

C. D. Holmes & Bay Ltd

when made 1915-2

Boilers made at

do

By whom made

do

when made 1915-2

Registered Horse Power

Owners East Riding S.F. Co. Ltd. (T. HUDSON MGR)

Port belonging to

Hull

Nom. Horse Power as per Section 28

49

Is Refrigerating Machinery fitted for cargo purposes

✓

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders Three

No. of Cranks 3

Dia. of Cylinders 12 3/4", 22", 36"

Length of Stroke 24

Revs. per minute

Dia. of Screw shaft

as per rule 4.56

Material of screw shaft

Iron

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

yes

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

✓

If two

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

✓

Length of stern bush 35 1/2"

Dia. of Tunnel shaft

as per rule 6.43

Dia. of Crank shaft journals

as per rule 4.06

Dia. of Crank pin 4.25

Size of Crank webs 14x4 1/8

Dia. of thrust shaft under

collars 7 1/4"

Dia. of screw 9'-3"

Pitch of Screw 11'-2"

No. of Blades 4

State whether moveable

no

Total surface 30 sq

No. of Feed pumps 1

Diameter of ditto 2 1/2"

Stroke 14 1/4"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps 1

Diameter of ditto 2 1/2"

Stroke 14 1/4"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines one

In Engine Room 2-2" dia

Sizes of Pumps 6" x 3 1/2" x 6"

flywheel

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

In Holds, &c. 4-2" dia, Forecastle, mainhold

ford slushwell, aft slushwell. (Ejector connected to all bilges)

No. of Bilge Injections 1

size 3 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size 2 1/2" ejector

yes

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

Forward suction

How are they protected

wood & iron

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

30-10-14

of Stern Tube

24-10-14

Screw shaft and Propeller

24-10-14

Is the Screw Shaft Tunnel watertight

✓

Is it fitted with a watertight door

✓

worked from

✓

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Stewarts & Lloyd

Total Heating Surface of Boilers

1310

Is Forced Draft fitted

no

Working Pressure

200 lb

Tested by hydraulic pressure to

400 lb

Date of test

20-10-14

No. of Certificate

3030

Can each boiler be worked separately

✓

Area of fire grate in each boiler

46.8

No. and Description of Safety Valves to

each boiler

Two Spring Loaded

Area of each valve

4.9

Pressure to which they are adjusted

200

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

6"

Mean dia. of boilers

162"

Length

10'-8"

Thickenss 1/32"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

Double

long. seams T.R.D.B.S.

Diameter of rivet holes in long. seams

1 1/32"

Pitch of rivets

8 1/16"

Lap of plates or width of butt straps

14 1/2"

Per centages of strength of longitudinal joint

rivets 88.4

plate 84.8

Working pressure of shell by rules

202 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 1 1/32"

No. and Description of Furnaces in each boiler

3 plain

Material

Steel

Outside diameter

39"

Length of plain part

top 46"

Thickness of plates

crown 25/32"

Description of longitudinal joint

welded

No. of strengthening rings

none

Working pressure of furnace by the rules

203

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back 23/32"

Top 3/4"

Bottom 3/4"

Pitch of stays to ditto: Sides

9" x 8 1/4"

Back 10" x 8 1/4"

Top 11" x 8 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

206

Material of stays

S

Diameter at smallest part

2.04

Area supported by each stay

91

Working pressure by rules

205

End plates in steam space

Material

S

Thickness

15/16"

Pitch of stays

20" x 20"

How are stays secured

DN & W

Working pressure by rules

204

Material of Front plates at bottom

S

Diameter at smallest part

8.76

Area supported by each stay

400

Working pressure by rules

224

Material of Lower back plate

S

Thickness

1"

Material of Lower back plate

S

Thickness

29/32"

Greatest pitch of stays

3 1/2" x 10"

Working pressure of plate by rules

202

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 5"

Material of tube plates

S

Thickness: Front

1"

Back 29/32"

Mean pitch of stays

10"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

203 lb

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

11 3/4" x 1 3/4"

Length as per rule

34 27/32"

Distance apart

11"

Number and pitch of stays in each

3 at 8 1/4"

Working pressure by rules

209

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

If 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

Foundation

71215-0161

IS A DONKEY BOILER FITTED?

NO

If so, is a report now forwarded?

✓

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, bilge & air pump valves, one safety valve spring, one main & one donkey feed check valve, one donkey pump valve, & and a quantity of bolts & nuts & iron of assorted sizes, 4. Tube stoppers.

The foregoing is a correct description,

P. PRO CHARLES D. HOLMES & CO. LTD.

Charles D. Holmes

DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1914 - July 25.31. Aug 14. 18. 20. 25. 26. 31. Sep 1. 4. 8. 14. 15. 18. 23. 26. Oct 1. 8. 14. 16. 19. 20. 22. During erection on board vessel - 26. 27. 30 Nov 3. 9. 14. 16. 18. 23. 27 Dec 3. 7. 10. 14. 24. 1915 - Jan 6. 14. 19. 22. 23. 25. 27 Feb 1. 3. 12. Total No. of visits 48.

Is the approved plan of main boiler forwarded herewith

yes ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 1-9-14 Slides 3-12-14. Covers 3-8-11-14 Pistons 24-10-14 Rods 23-11-14 Connecting rods 23-11-14 Crank shaft 15-9-14 Thrust shaft 7-12-14 Tunnel shafts ✓ Screw shaft 19-10-14 Propeller 24-10-14

Stern tube 24-10-14 Steam pipes tested 25-1-15 Engine and boiler seatings 30-10-14 Engines holding down bolts 19-1-15

Completion of pumping arrangements 12-2-15 Boilers fixed 19-1-15 Engines tried under steam 24-1-15

Main boiler safety valves adjusted 24-1-15 Thickness of adjusting washers FORD $\frac{3}{8}$ " AFT $\frac{5}{16}$ "

Material of Crank shaft S Identification Mark on Do 124 F.L.S Material of Thrust shaft steel Identification Mark on Do 1400 F.L.S

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do 1294 F.L.S

Material of Steam Pipes Solid drawn Copper ✓ Test pressure 400 lbs \square ✓

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 machinery of this vessel has been constructed under special survey in accordance with the approved plan & rules of this Society. the material and workmanship are good. the boiler and steam pipes have been tested as above & found sound and good. the machinery has been properly fitted and secured on board & on completion was tried under steam and found to work satisfactorily. the safety valves have been adjusted under steam & tested for accumulation.

In my opinion the vessel is eligible for record of + LMC 2.15

It is submitted that this vessel is eligible for THE RECORD + LMC 2.15.

JWR 24/2/15

W.H. Roberts

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

The amount of Entry Fee ... £ 1 : - : - :
Special ... £ 11 : 14 : - :
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : 1/4 : : :

When applied for,

20/2/1915

When received,

26/2/1915

Committee's Minute FRI. FEB. 26. 1915

Assigned

+ Lmc 2.15

MAINTENANCE CERTIFICATE



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