

Received at London Office SAT. JUL. 15. 1911

Date of writing Report

19

When handed in at Local Office

13th July 1911 Port of Hull

No. in Survey held at

Hull & Goole

Date, First Survey April 5thLast Survey 12th July 1911

Reg. Book.

4th Supp. on the

Steel S. K. Duster

(Number of Visits)

Gross 192

Net 72

Master

Built at

Goole

By whom built

Geo. S. B. R. 6th D

When built

1911

Engines made at

By whom made

Messrs

when made

1911

Boilers made at

Hull

By whom made

Earles 6th D.

when made

1911

Registered Horse Power

Owners

Kelsall Brothers & Beeching Ltd. Port belonging to Hull

Nom. Horse Power as per Section 28

55

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

12' - 21' - 33'

Length of Stroke

21"

Revs. per minute

125

Dia. of Screw shaft

as per rule 7.38

Material of screw shaft

Iron

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

Yes

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

2 liners

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

Length of stern bush

36"

Dia. of Turret shaft

as per rule 5.74

Dia. of Crank shaft journals

as per rule 6.03

Dia. of Crank pin

6.5"

Size of Crank webs

12 1/2" x 4 1/2"

Dia. of thrust shaft under

collars

as fitted 6.5"

Dia. of screw

9' - 6"

Pitch of Screw

7' - 0"

No. of Blades

4

State whether moveable

No

Total surface

32 sq

No. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

No. of Donkey Engines

One

Sizes of Pumps

4 1/2" x 2 3/4" x 4" duplex

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

In Engine Room

One 2", one 2 1/2", one 3 1/2"

In Holds, &c.

One 2" to fore hold, Two 2" to

No. of Bilge Injections

1 sizes 3 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 2 1/2" Ejector

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

hold suction

How are they protected

wood 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

27. 5. 11

of Stern Tube

27. 5. 11

Screw shaft and Propeller

27. 5. 11

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

—

worked from

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel Phoenix Mkt. Geo. Horder, Keen

Total Heating Surface of Boilers

900 sq

Is Forced Draft fitted

No

No. and Description of Boilers

One cyl. Mulk. S. Ended

Working Pressure

160 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

2. 6. 11

No. of Certificate

1815

Can each boiler be worked separately

—

Area of fire grate in each boiler

24.5 sq

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

3.14 sq

Pressure to which they are adjusted

165 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

11"

Mean dia. of boilers

10' - 6"

Length

9' - 6"

Material of shell plates

S

Thickness

27"

Range of tensile strength

28 - 32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

L. D.

long. seams

D. B. S. J. R.

Diameter of rivet holes in long. seams

1 7/8"

Pitch of rivets

5 3/8"

Lap of plates or width of butt straps

11 1/2"

Per centages of strength of longitudinal joint

rivets 86.4

plate 80.2

Working pressure of shell by rules

161 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 27"

No. and Description of Furnaces in each boiler

Two plain

Material

S

Outside diameter

34"

Length of plain part

top 6' - 4 1/2"

Thickness of plates

crown 21"

bottom 32"

Description of longitudinal joint

welded

No. of strengthening rings

0

Working pressure of furnace by the rules

176 lbs

Combustion chamber plates: Material

S

Thickness: Sides

5/8"

Back

21/32"

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

8 1/2" x 9"

Back

10" x 9"

Top

9" x 7 1/2"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

165 lbs

Material of stays

S

Diameter at smallest part

1 1/2"

Area supported by each stay

76.5 sq

Working pressure by rules

185 lbs

End plates in steam space:

Material

S

Thickness

7/8"

Pitch of stays

15" x 15"

How are stays secured

D. N

Working pressure by rules

161 lbs

Material of stays

S

Diameter at smallest part

2 5/16"

Area supported by each stay

225 sq

Working pressure by rules

195 lbs

Material of Front plates at bottom

S

Thickness

7/8"

Material of Lower back plate

S

Thickness

7/8"

Greatest pitch of stays

14" x 9"

Working pressure of plate by rules

191 lbs

Diameter of tubes

3"

Pitch of tubes

4 3/8" x 4 5/8"

Material of tube plates

S

Thickness: Front

7/8"

Back

1 1/16"

Mean pitch of stays

9"

Pitch across wide water spaces

14"

Working pressures by rules

160 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

7 1/4" x 1 1/2"

Length as per rule

2 - 3 3/4"

Distance apart

7 1/2"

Number and pitch of stays in each

Two 9"

Working pressure by rules

225 lbs

Superheater or Steam chest; how connected to boiler

rusted

Can the superheater be shut off and the boiler worked

separately

No

Diameter

30"

Length

30"

Thickness of shell plates

5/8"

Material

S

Description of longitudinal joint

L. D.

Diam. of rivet

holes

1"

Pitch of rivets

3 1/4"

Working pressure of shell by rules

370 lbs

Diameter of flue

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 each top and bottom end of connecting rod and main bearing bolts and nuts, one set coupling bolts and nuts one set each air, circulating, feed and bilge pump valves, Iron of various sizes and a quantity of assorted bolts nuts etc etc
The foregoing is a correct description,
J. J. Salethorpe
SECRETARY, Manufacturer.

Dates of Survey while building { During progress of work in shops - 1911 - April 5. 7. 13. 20. 21. 25. 27. May 1. 4. 9. 10. 11. 16. 19. 22. 23. 24. 26. 27. 31
During erection on board vessel - Jun. 1. 2. 8. 12. 13. 14. 16. 19. 21. July 5. 12.
Total No. of visits 31.

Is the approved plan of main boiler forwarded herewith Yes
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 22. 5. 11 Slides 31. 5. 11 Covers 31. 5. 11 Pistons 31. 5. 11 Rods 16. 5. 11
Connecting rods 27. 5. 11 Crank shaft 16. 5. 11 Thrust shaft 19. 5. 11 Tunnel shafts Screw shaft 11. 5. 11 Propeller 27. 5. 11
Stern tube 11. 5. 11 Steam pipes tested 13. 6. 11 Engine and boiler seatings 8. 6. 11 Engines holding down bolts 16. 6. 11
Completion of pumping arrangements 12. 7. 11 Boilers fixed 16. 6. 11 Engines tried under steam 12. 7. 11
Main boiler safety valves adjusted 12. 7. 11 Thickness of adjusting washers 13/32 - 12/32
Material of Crank shaft S Identification Mark on Do. 2747 H.D.H Material of Thrust shaft S Identification Mark on Do. 2747 H.D.H
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts I Identification Marks on Do. 146. 38. 11. 08 AT6
Material of Steam Pipes Solid drawn copper Test pressure 400 lbs per sq. inch

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boiler of this vessel have been constructed under special survey in accordance with the Rules, the materials and workmanship are good. The boiler tested by hydraulic pressure, and with the engines secured on board, and tested 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 L.M.C. 7. 11 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 7. 11.

JWR.
17/7/11.

The amount of Entry Fee .. £ 1 : 0 :
Special .. £ 8 : 5 :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ : 6 : 4

When applied for, 14. 7. 11
When received, 19. 8. 11

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

Committee's Minute
Assigned
TUE JUL 18 1911
+ L.M.C. 7. 11

MACHINERY CERTIFICATE
WRITTEN.