

REPORT ON MACHINERY.

No.

FRI. OCT. 20. 1911

Date of writing Report

When handed in at Local Office

18.10.11 Port of Hull

No. in

Survey held at

Hull & Goole

Date, First Survey

Jan 7th

Last Survey

5th Oct

1911

Reg. Book.

on the

Steel S.S. 1091 9th SKELL

(Number of Visits)

53

Gross

Net

When built

1911

Master

Built at

By whom built

Engines made at

Hull

By whom made

Messrs. Earles & Co. L^d

when made

1911

Boilers made at

"

By whom made

"

when made

1911

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

104

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

15" - 25" - 40"

Length of Stroke

27"

Revs. per minute

90

Dia. of Screw shaft

8.9"

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

Yes

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

No

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 liners

Length of stern bush

3'-6"

Dia. of Tunnel shaft

as per rule 7.83

4.46

Dia. of Crank shaft journals

as per rule 7.83

7.83

Dia. of Crank pin

7.875

Size of Crank webs

15" x 5 1/2"

Dia. of thrust shaft under

collars

7.875

Dia. of screw

10.5"

Pitch of Screw

12.25 feet

No. of Blades

4

State whether moveable

No

Total surface

36 sq

No. of Feed pumps

Two

Diameter of ditto

2 1/2"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

2 1/2"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Two

Sizes of Pumps

6" x 4" x 6"

6" x 4 1/2" x 6"

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

In Engine Room

Three, each 2"

one 3 1/2"

In Holds, &c.

Two each 2"

in fore aft holds,

Two each 3" in aft tank,

one 3" to tunnel well, one each 3" to fore aft peak tanks

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"

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

8.8.11

of Stern Tube

8.8.11

Screw shaft and Propeller

8.8.11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from top platform

BOILERS, &c.—(Letter for record

5)

Manufacturers of Steel

Messrs. W. Beardmore & Co. L^d

Total Heating Surface of Boilers

1800 sq

Is Forced Draft fitted

No

No. and Description of Boilers

One Gyl. Mulli 8. Ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

27.7.1911

No. of Certificate

1826

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

54 sq

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

5.93 sq

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

10"

Mean dia. of boilers

14'-0"

Length

10'-6"

Material of shell plates

S

Thickness

19 3/32

Range of tensile strength

28.32

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

15 1/16"

Pitch of rivets

8 3/4"

Lap of plates or width of butt straps

19 1/2"

Per centages of strength of longitudinal joint

rivets 95%

plate 85%

Working pressure of shell by rules

183 lbs

Size of manhole in shell

end plate 16" x 12"

Size of compensating ring

3 1/2"

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

40 1/2"

Length of plain part

top 6'-7 1/2"

Thickness of plates

crown 25"

bottom 32"

Description of longitudinal joint

Welded

No. of strengthening rings

0

Working pressure of furnace by the rules

191 lbs

Combustion chamber plates: Material

S

Thickness: Sides

31 3/32"

Back

21 3/32"

Top

21 3/32"

Bottom

32"

Pitch of stays to ditto: Sides

9 1/4" x 8"

Back

9 1/4" x 8 1/2"

Top

8 1/4" x 8"

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

199 lbs

Material of stays

S

Diameter at smallest part

1 1/2"

Area supported by each stay

77.66 sq

Working pressure by rules

182 lbs

End plates in steam space:

Material

S

Thickness

15 3/32"

Pitch of stays

16 3/4" x 18 1/2"

How are stays secured

D. N.

Working pressure by rules

192 lbs

Material of stays

S

Diameter at smallest part

2 1/16"

Area supported by each stay

309.875 sq

Working pressure by rules

207 lbs

Material of Front plates at bottom

S

Thickness

15 1/16"

Material of Lower back plate

S

Thickness

2 1/8"

Greatest pitch of stays

13 1/2" x 9 1/2"

Working pressure of plate by rules

199 lbs

Diameter of tubes

3 1/2"

Pitch of tubes

4 7/8" x 4 3/4"

Material of tube plates

S

Thickness: Front

15 1/16"

Back

15 1/16"

Mean pitch of stays

9 5/8"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

185 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

9 1/2" x 15 1/8"

Length as per rule

2'-9 1/8"

Distance apart

8 1/4"

Number and pitch of stays in each

Three 8"

Working pressure by rules

218 lbs

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

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 _____ Rivets _____ Plates _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____
 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 each top and bottom end connecting rods, bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts, One set each air, circulating feed and bilge pump valves, Iron various sizes, and a quantity of assorted bolts, nuts etc.
 The foregoing is a correct description,
 F. J. Palethorpe Manufacturer.

Dates of Survey while building { During progress of work in shops -- } SECRETARY. 1911: Jan 7. 10. 12. 14. 19. Feb 2. 8. 10. 13. 15 Mar 6. 8. 13. 22. 23 Apr 5. 7. 10. 12. 14. 19. 21. 25 May 1. 4. 9. 16. 19. 22. 25. 27. 30. 31 Jun 8. 12. 15. 19. 26. 28 July 7. 11. 14. 19. 22. 25. 27. 29 Aug 5. 8. 9. 11. 14. 15. 16
 Total No. of visits 55
 Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 19. 5. 11 Slides 12. 19. 6. 11 Covers 1. 5. 11 Pistons 21. 4. 11 Rods 19. 5. 11
 Connecting rods 13. 3. 11 Crank shaft 9. 5. 11 Thrust shaft 5. 8. 11 Tunnel shafts 21. 8. 11 Screw shaft 8. 8. 11 Propeller 8. 8. 11
 Stern tube 19. 7. 11 Steam pipes tested 16. 8. 11 Engine and boiler seatings 5. 8. 11 Engines holding down bolts 16. 8. 11
 Completion of pumping arrangements 5. 10. 11 Boilers fixed 16. 8. 11 Engines tried under steam 5. 10. 11
 Main boiler safety valves adjusted 5. 10. 11 Thickness of adjusting washers 3/8" 3/8"
 Material of Crank shaft S Identification Mark on Do. 2728 YD H Material of Thrust shaft S Identification Mark on Do. 2806 YD H
 Material of Tunnel shafts S Identification Marks on Do. 2806 YD H Material of Screw shafts S Identification Marks on Do. 2806 YD H
 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. 10.11 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 10.11.

The amount of Entry Fee .. £ 2 : : When applied for, Special .. £ 15 : 12 : 18-10-1911 Donkey Boiler Fee .. £ : : When received, Travelling Expenses (if any) £ : 9 : 6 : 1-11-1911

Committee's Minute

Assigned

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



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