

REPORT ON MACHINERY.

No. 24263

Received at London Office NOV. 8 NOV 1909

Date of writing Report

19

When handed in at Local Office

6. 11. 09 Port of Sunderland

No. in Survey held at
Reg. Book.

Sunderland

Date, First Survey

16 July 09

Last Survey

17 Nov 09

1909.

on the

S/S Lady Helen

Master

E. Roberts

Built at

S'land.

By whom built

S.P. Austin & Son.

Tons

Gross

811

Net

419

When built

1909.

Engines made at

S'land.

By whom made

H.E.M. Eng 6° 1°

when made 1909.

Boilers made at

"

By whom made

"

when made 1909.

Registered Horse Power

Owners Marquis of Londonderry

Port belonging to

Seaham Harbour Sunderland

Nom. Horse Power as per Section 28

138.

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No.

ENGINES, &c.—Description of Engines

In C.P.D.

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

17" 28" 46"

Length of Stroke

30

Revs. per minute

88

Dia. of Screw shaft

as per rule 9.26
as fitted 9.8

Material of screw shaft

I.

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 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.

If two

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

yes.

Length of stern bush

3' 2"

Dia. of Tunnel shaft

as per rule 8.06
as fitted 8.8

Dia. of Crank shaft journals

as per rule 8.46
as fitted 8.8

Dia. of Crank pin

8.5

Size of Crank webs

13.5

Dia. of thrust shaft under

collars

8.5

Dia. of screw

11.8

Pitch of Screw

13 ft.

No. of Blades

4

State whether moveable

f

Total surface

44 sq.

No. of Feed pumps

2

Diameter of ditto

2 1/4

Stroke

15

Can one be overhauled while the other is at work

yes.

No. of Bilge pumps

2

Diameter of ditto

3

Stroke

15

Can one be overhauled while the other is at work

yes.

No. of Donkey Engines

2

Sizes of Pumps

7x9, 9:5x3 4 1/2

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

In Engine Room

3 of 2 1/2.

In Holds, &c.

2 of 2 1/2 in each

No. of Bilge Injections

1

sizes

3 1/2

Connected to

C.P.

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

yes.

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

yes.

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

5. 11. 09

of Stern Tube

5. 11. 09.

Screw shaft and Propeller

5. 11. 09.

Is the Screw Shaft Tunnel watertight

yes.

Is it fitted with a watertight door

yes.

worked from

top platform.

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

J. Spencer & Sons

Total Heating Surface of Boilers

2400

Is Forced Draft fitted

no.

No. and Description of Boilers

One S.E.

Working Pressure

160

Tested by hydraulic pressure to

320

Date of test

10. 9. 09.

No. of Certificate

2782.

Can each boiler be worked separately

yes.

Area of fire grate in each boiler

58.2

No. and Description of Safety Valves to

each boiler

2 Spring

Area of each valve

7.04

Pressure to which they are adjusted

165

Are they fitted with easing gear

yes.

Smallest distance between boilers or uptakes and bunkers or woodwork

19"

Mean dia. of boilers

15.6 1/2

Length

10.6

Material of shell plates

S

Thickness

1 1/2

Range of tensile strength

28 1/2 - 32

Are the shell plates welded or flanged

each

Descrip. of riveting: cir. seams

d. r. lap

long. seams

d. butt

Diameter of rivet holes in long. seams

1 1/2

Pitch of rivets

9/4

Lap of plates or width of butt straps

18 1/4

Per centages of strength of longitudinal joint

rivets 86.6
plate 86.8

Working pressure of shell by rules

161

Size of manhole in shell

16x12

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 Deighton's

Material

S

Outside diameter

47 1/4

Length of plain part

top 14
bottom 14

Thickness of plates

crown 14
bottom 14

Description of longitudinal joint

weld

No. of strengthening rings

yes.

Working pressure of furnace by the rules

171

Combustion chamber plates: Material

S

Thickness: Sides

3/4

Back

3/4

Top

3/4

Bottom

3/4

Pitch of stays to ditto: Sides

13x8 1/2

Back

11 1/2x10

Top

13x8 1/2

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

163

Material of stays

S

Diameter at smallest part

2.1

Area supported by each stay

117

Working pressure by rules

161

Material of stays

S

Area

Diameter

at smallest part

8.48

Area supported by each stay

531.7

Working pressure by rules

165

Material of Front plates at bottom

S

Thickness

3/4

Material of Lower back plate

S

Thickness

2 1/2

Greatest pitch of stays

14 3/8x18

Working pressure of plate by rules

161

Diameter of tubes

3 1/4

Pitch of tubes

4 1/2x4 1/2

Material of tube plates

S

Thickness: Front

3/4

Back

3/4

Mean pitch of stays

11 1/2x9

Pitch across wide water spaces

14 1/2

Working pressures by rules

165

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

8 1/2x1 1/2

Length as per rule

29 1/2

Distance apart

13

Number and pitch of stays in each

2 @ 8 1/2

Working pressure by rules

166

Superheater or Steam chest; how connected to boiler

no

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

yes.

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes.

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes.

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes.

Working pressure of end plates

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 Say, in Book.
 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:— 1 set connecting rod bolts & nuts.
 2 main bearing bolts & nuts 1 set coupling bolts & nuts.
 1 set feed and bilge pump valves, propeller shaft.
 nuts bolts & assorted iron

NORTH EASTERN MARINE ENGINEERING CO LTD

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
 During progress of work in shops— 1909- July 16. 23. 28. 30. Aug 9. 10. 15. 16. 23. 26. Sept. 1. 10. 16. 21. 24.
 During erection on board vessel— 30 Oct. 5. 13. 14. 15. 19. 20. 27. Nov. 1
 Total No. of visits 24

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

Dates of Examination of principal parts—Cylinders 16. 6. 09 Slides 23. 6. 09 Covers 23. 6. 09 Pistons 16. 6. 09 Rods 16. 6. 09
 Connecting rods 16. 6. 09 Crank shaft 1. 9. 09 Thrust shaft 1. 9. 09 Tunnel shafts 1. 9. 09 Screw shaft 30. 9. 09 Propeller 30. 9. 09
 Stern tube 5. 11. 09 Steam pipes tested 14. 10. 09. Engine and boiler seatings 5. 11. 09. Engines holding down bolts 13. 11. 09.
 Completion of pumping arrangements 1. 11. 09. Boilers fixed 13. 11. 09. Engines tried under steam 19. 10. 09.
 Main boiler safety valves adjusted 19. 10. 09. Thickness of adjusting washers 7 5/16 A. 3/16.
 Material of Crank shaft S Identification Mark on Do. B. J. T. F Material of Thrust shaft S Identification Mark on Do. B. J. T. F
 Material of Tunnel shafts I Identification Marks on Do. B. J. T. F Material of Screw shafts I Identification Marks on Do. B. J. T. F
 Material of Steam Pipes Copper. Test pressure 320 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. Engines and boilers built under Special Survey. Materials & workmanship good. Engines & boilers examined under full steam & found satisfactory. In my opinion this vessel is eligible for the record. of L.M.C. 11/09

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11.09

H.S.D.

8.11.09.

The amount of Entry Fee £ 2 : : : When applied for, 1 Nov 09
 Special £ 20 : 14 : : : When received, 3 Nov 09
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :

Committee's Minute

FRI. 12 NOV 1909

Assigned

+ L.M.C. 11.09.

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



© 2020

Lloyd's Register Foundation

MACHINERY CERTIFICATE WRITTEN.