

Date of writing Report

19

When handed in at Local Office

19.4.13 Port of Sunderland

No. in Survey held at
Reg. Book.

SUNDERLAND

Date, First Survey

25 Oct.

Last Survey

15 April 1913

on the

Dingle Bank

(Number of Visits)

Tons

Gross 2130

Net 1940

When built

1913

Master

Kerr

Built at

Sunderland

By whom built

Blumer & Co.

Engines made at

Sland

By whom made

J. Dickinson & Sons Ltd

when made

1913

Boilers made at

"

By whom made

"

when made

1913

Registered Horse Power

Owners

Hawthorn & Sons Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

303

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Tri C.P.D.

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24.39.65

Length of Stroke

42

Revs. per minute

70

Dia. of Screw shaft

as per rule 13.38

Material of

W. 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 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

yes

If two

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

yes

Length of stern bush

4' 6"

Dia. of Tunnel shaft

as per rule 11.78

Dia. of Crank shaft journals

as per rule 12.36

Dia. of Crank pin

12 3/8

Size of Crank webs

patent

Dia. of thrust shaft under

collars

12 3/8

Dia. of screw

16' 6"

Pitch of Screw

16 ft.

No. of Blades

4

State whether moveable

no

Total surface

80 sq ft

No. of Feed pumps

2

Diameter of ditto

34"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

21"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

4 x 6, 7 x 9, 10"

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

In Engine Room

4 of 3"

In Holds, &c.

two of 3" in each

No. of Bilge Injections

1

sizes

4

Connected to condenser, or to circulating pump

C.P.

Is a separate Donkey Suction fitted in Engine room of size

yes

4"

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

28.2.13

of Stern Tube

13.3.13

Screw shaft and Propeller

26.3.13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

J. Spencer & Sons Ltd

Total Heating Surface of Boilers

4736 sq ft

Is Forced Draft fitted

no

No. and Description of Boilers

two Marine type

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

13.3.13

No. of Certificate

3096

Can each boiler be worked separately

yes

Area of fire grate in each boiler

65 sq ft

No. and Description of Safety Valves to

each boiler

two spring

Area of each valve

8.3"

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

1' 8"

Mean dia. of boilers

16'-0"

Length

11'-0"

Material of shell plates

S

Thickness

1 1/4"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

d. r. lap

long. seams

7:7: d. B. S

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 1/2"

Length of plates or width of butt straps

1' 7 1/8"

Per centages of strength of longitudinal joint

rivets 96.8

plate 85

Working pressure of shell by rules

180 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

8 3/4 x 1 1/4"

No. and Description of Furnaces in each boiler

3

Material

S

Outside diameter

4' 2"

Length of plain part

top 9"

bottom 9"

Thickness of plates

crown 19"

bottom 32"

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

189 lbs

Combustion chamber plates: Material

S

Thickness: Sides

1/8"

Back

1/8"

Top

1/8"

Bottom

Pitch of stays to ditto: Sides

10 1/2 x 8 3/4"

Back

10 3/4 x 8"

Top

9 1/2 x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

191

Material of stays

S

Diameter at smallest part

1' 6"

Area supported by each stay

85 1/2"

Working pressure by rules

185

End plates in steam space

Material

S

Thickness

1 3/8"

Pitch of stays

18 x 21"

How are stays secured

d. nuts

Working pressure by rules

184

Material of stays

S

Diameter at smallest part

2' 9 1/2"

Area supported by each stay

378"

Working pressure by rules

184

Material of Front plates at bottom

S

Thickness

1/8"

Material of Lower back plate

S

Thickness

3/32"

Greatest pitch of stays

14 x 8"

Working pressure of plate by rules

189

Diameter of tubes

3 3/4"

Pitch of tubes

4 1/2 x 4 1/2"

Material of tube plates

S

Thickness: Front

1/8"

Back

1/8"

Mean pitch of stays

9 x 9"

Pitch across wide water spaces

1' 2 1/4"

Working pressures by rules

249 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

6 3/8" x 13 x 2"

Length as per rule

2' 7 1/2"

Distance apart

Working pressure by rules

187 lbs

Superheater or Steam chest; how connected to boiler

yes

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

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fired _____

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 _____ 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:— *Propeller, set coupling bolts & nuts, two main bearing bolts & nuts, two top & bottom end bolts & nuts, set of feed & bilge pump valves, set air & fire pump valves, two feed check valves, two feed (donkey) & two ballast donkey valves, two safety & two escape valve springs, nuts bolts & assorted iron*

The foregoing is a correct description,

John D. Smith & Sons, Limited.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - } *1912. Oct. 25. Nov. 1. 5. 29. Dec. 9. 12. 17. 19. 31. Jan. 10. 20. 23. 30. 31. Feb. 5. 6. 7. 12. 28*
 { During erection on board vessel - - - } *Mar. 3. 6. 10. 12. 13. 14. 20. 21. 24. 26. 27. 28. Apr. 1. 2. 3. 11. 15*
 Total No. of visits *(36)*

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

Dates of Examination of principal parts—Cylinders *22.1.13* Slides *12.2.13* Covers *12.2.13* Pistons *12.2.13* Rods *12.2.13*
 Connecting rods *12.2.13* Crank shaft *10.3.13* Thrust shaft *28.2.13* Tunnel shafts *28.2.13* Screw shaft *28.2.13* Propeller *28.2.13*
 Stern tube *2.3.13* Steam pipes tested *20.3.13* Engine and boiler seatings *22.3.13* Engines holding down bolts *26.3.13*
 Completion of pumping arrangements *1.4.13* Boilers fixed *26.3.13* Engines tried under steam *28.3.13*
 Main boiler safety valves adjusted *28.3.13* Thickness of adjusting washers *PB f 7/32 2 7/32 SB f 4/32 2 7/32*
 Material of Crank shaft *Steel* Identification Mark on Do. *2008 H.B.* Material of Thrust shaft *Steel* Identification Mark on Do. *H.B. 2296*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *2368, 9, 478 H.B.* Material of Screw shafts *S.* Identification Marks on Do. *R. J.T.F.*
 Material of Steam Pipes *Copper* Test pressure *100 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *Engines & boilers built under Special survey. Materials and workmanship good. Engines & boilers examined under full steam & found satisfactory.*
It is submitted that this vessel is worthy of the consideration of the Committee for the record of L.M.C. 4.13 in the Register Book.

It is submitted that this vessel is eligible for the record of L.M.C. 4.13.

J.A.D. 23/4/13.

The amount of Entry Fee .. £ *8* : - : - : When applied for, *21.4.13*
 Special .. £ *25* : 3 : - :
 Donkey Boiler Fee .. £ : : : When received, *23.4.13*
 Travelling Expenses (if any) £ : : : *54*

Committee's Minute

Assigned

FRI. APR. 25. 1913

L.M.C. 4.13

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



Lloyd's Register Foundation

MACHINERY CERTIFICATE WRITTEN.