

REPORT ON MACHINERY.

No. 26343

Received at London Office

TUE. JAN. 26. 1915

Date of writing Report 14-1-1915 When handed in at Local Office 18-1-1915 Port of Sunderland

No. in Survey held at Sunderland

Date, First Survey 7 Sept.

Last Survey 14-1-1915

Reg. Book.

(Number of Visits 29)

Gross

4645

Tons

Net

2921

Supp 17 on the new steel 915" INDIAN CITY

Master J. Williams

Built at Sunderland

By whom built

William D. Oxford & Sons Ltd

(N° 471)

When built

1915

Engines made at Sunderland

By whom made

William D. Oxford & Sons Ltd

(N° 471)

when made

1915

Boilers made at Sunderland

By whom made

William D. Oxford & Sons Ltd

(N° 471)

when made

1915

Registered Horse Power

Owners

Inflow & Co Ltd

Port belonging to

Bideford

Nom. Horse Power as per Section 28

412

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 25" 42 1/2" 70"

Length of Stroke 48"

Revs. per minute 64

Dia. of Screw shaft

as per rule 14 1/2"

Material of steel

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 5-7 1/2"

Dia. of Tunnel shaft

as per rule 12 1/2"

Dia. of Crank shaft journals

as per rule 13 1/2"

Dia. of Crank pin

13 1/2"

Size of Crank webs 18 1/2" x 9"

Dia. of thrust shaft under

collars 13 1/2"

Dia. of screw 17-9"

Pitch of Screw 17-9"

No. of Blades 4

State whether moveable

no

Total surface 97 1/2"

No. of Feed pumps 2

Diameter of ditto 4 3/4"

Stroke 24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps 2

Diameter of ditto 4 3/4"

Stroke 24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines 4

Sizes of Pumps 2 @ 9 1/2" x 9"

2 @ 6 1/2" x 6"

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

In Engine Room 4 @ 3 1/2"

In Holds, &c. N° 1 hold - 2 @ 3 1/2" N° 2 hold - 2 @ 3 1/2"

N° 3 hold - 2 @ 3 1/2" N° 4 hold - 3 @ 3 1/2"

Tunnel well - 1 @ 3"

No. of Bilge Injections 1

size 6"

Connected to condenser, or to circulating pump

B.P.

Is a separate Donkey Suction fitted in Engine room & size

yes 3 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

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 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

3-11-14

of Stern Tube

3-11-14

Screw shaft and Propeller

2-12-14

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

John Spencer & Sons Ltd

Total Heating Surface of Boilers 6959 1/2

Is Forced Draft fitted

no

No. and Description of Boilers

Three single ended marine

Working Pressure 180

Tested by hydraulic pressure to

360

Date of test

3-11-14

No. of Certificate

3256

Can each boiler be worked separately

yes

Area of fire grate in each boiler

54 1/2

No. and Description of Safety Valves to

each boiler

Two direct spring

Area of each valve

7.06 0'

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

1-10"

Mean dia. of boilers

15-1"

Length

10-6"

Material of shell plates

steel

Thickness 1 1/2"

Range of tensile strength

29 3/4-33

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR

long. seams

DBS. TR

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 1/2"

Lap of plates or width of butt straps

18 3/8"

Per centages of strength of longitudinal joint

rivets 93

plate 85 1/2

Working pressure of shell by rules

182

Size of manhole in shell

16" x 12"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 maison bon

Material

Steel

Outside diameter

3-10 1/4"

Length of plain part

top

bottom

Thickness of plates

crown 1 1/2"

bottom 1 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

-

Working pressure of furnace by the rules

183

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

Bottom

Pitch of stays to ditto: Sides

9 1/2" x 9 1/2"

Back

10" x 9"

Top

10" x 9"

If stays are fitted with nuts or riveted heads

nut in case only

Working pressure by rules

180

Material of stays

Steel

Diameter at smallest part

2-03 1/2" x 2-11 1/2"

Area supported by each stay

908 1340"

Working pressure by rules

2038 182

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

20" x 21 1/2"

How are stays secured

DN & wash

Working pressure by rules

180

Material of stays

Steel

Diameter at smallest part

1-850"

Area supported by each stay

4300"

Working pressure by rules

190

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of Lower back plate

Steel

Thickness

2 1/2"

Greatest pitch of stays

12 1/2" x 10"

Working pressure of plate by rules

183

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

59"

Back

74"

Mean pitch of stays

11 1/4"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

186

Girders to Chamber taps: Material

Steel

Depth and

thickness of girder at centre

2 @ 8 1/8" x 7 1/4"

Length as per rule

29 9/16"

Distance apart

10"

Number and pitch of stays in each

2 @ 9"

Working pressure by rules

184

Superheater or Steam chest; how connected to boiler

none

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

-

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

Im. 212-1-1

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Lloyd's Register
Foundation

Manufacturers of Steel

SPARE GEAR. State the articles supplied:— Two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, one set of feed, bilge, air and circulating pump valves, iron and bolts of various sizes, one tail shaft.

The foregoing is a correct description,

Dates of Survey while building	During progress of work in shops --	1914. Sep 7. 16. 24. 29. Oct 7. 14. 15. 26. 29. Nov. 3. 9. 12. 13. 19. 24. 25. 27. 28. 30.
	During erection on board vessel --	Dec 2. 4. 9. 17. 18. 19. 21. Jan 5. 7. 14.
	Total No. of visits.	(32)

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 15-10-14 Slides 9-11-14 Covers 26-10-14 Pistons 12-11-14 Rods 7-10-14
Connecting rods 19-11-14 Crank shaft 22-5-14 Thrust shaft 3-11-14 Tunnel shafts 27-11-14 Screw shafts 19-11-14 18-12-14 Propeller 13-11-14
Stern tube 26-10-14 Steam pipes tested 29-10-14 19821-12-14 Engine and boiler seatings 7-10-14 Engines holding down bolts 5-1-15
Completion of pumping arrangements 14-1-15 Boilers fixed 5-1-15 Engines tried under steam 7-1-15
Main boiler safety valves adjusted 7-1-15 Thickness of adjusting washers Port Bl. - P7/16" S 1/2" In. Bottom Bl. P7/16" S 3/8" S 1/2" S 1/2" S 1/2"
Material of Crank shaft I. Steel Identification Mark on Do. 23788 AFÖ Material of Thrust shaft I. Steel Identification Mark on Do. 744N W.C.
Material of Tunnel shafts I. Steel Identification Marks on Do. 744N. W.C. Material of Screw shafts I. Steel Identification Marks on Do. 744N. W.C. & 744N. W.C. & 744N. W.C.
Material of Steam Pipes Solid drawn copper - 6 @ 4 1/2" S W.C. Test pressure 400 lbs per square inch.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good
The machinery has been constructed under special survey and is eligible in my
opinion for classification and the record - \pm LMC 1, 15

It is submitted that
this vessel is eligible for
THE RECORD + LMC. 1.15

The amount of Entry Fee .. £	3	:	-	:	When applied for,
Special £	40	:	12	:	25 JAN 1915
Donkey Boiler Fee £		:		:	When received,
Travelling Expenses (if any) £		:		:	30/1/15

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

Committee's Minute

FRI. JAN. 29. 1915

Assigned

Surveyor's Signature

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