

REPORT ON MACHINERY

No. 25178

TUE. MAR. 19. 1912

Received at London Office

Date of writing Report

19

When handed in at Local Office

14 3 1912

Port of Sunderland

No. in Survey held at

Sunderland

Date, First Survey

17 August

Last Survey

5 March 1912

Reg. Book.

on the

88 "Wyrishbrook"

(Number of Visits)

Tons

Gross 3158

Net 1964

Master M. Williams

Built at

Sunderland

By whom built

J. Blunell & Co. 10210

When built

1912

Engines made at

Sunderland

By whom made

North Eastern Marine Eng. Co. Ltd (2033C) when made 1912

Boilers made at

Sunderland

By whom made

North Eastern Marine Eng. Co. Ltd when made 1912

Registered Horse Power

Owners Brook & Co. (Heller, Richards)

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

284

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders 23" x 38" x 61"

Length of Stroke 42"

Revs. per minute

69

Dia. of Screw shaft as per rule 13.08

Material of screw shaft Ingot 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

yes

If two

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

Length of stern bush 4'-4 1/2"

Dia. of Tunnel shaft as per rule 11.42

Dia. of Crank shaft journals as per rule 12.05

Dia. of Crank pin 12 3/8

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

collars 12 3/8

Dia. of screw 16 3/8

Pitch of Screw 16'-0"

No. of Blades 4

State whether moveable

no

Total surface 81 sq

No. of Feed pumps 2

Diameter of ditto 3 1/4"

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 1 3/4" x 9" x 10"

6" x 4" x 6"

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

In Engine Room

Three @ 3" dia.

In Holds, &c.

No. 1, 2 @ 3" dia.; No. 2, 2 @ 3" dia.

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 & 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

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

24-1-12

of Stern Tube

20-2-12

Screw shaft and Propeller

20-2-12

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

4400

Is Forced Draft fitted

no

No. and Description of Boilers

Two single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

20-12-11

No. of Certificate

2948

Can each boiler be worked separately

yes

Area of fire grate in each boiler

58 sq

No. and Description of Safety Valves to

each boiler

Two direct spring

Area of each valve

5.94 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

24"

Mean dia. of boilers

15'-9 1/16"

Length

10'-6"

Material of shell plates

Steel

Thickness

1 3/32"

Range of tensile strength

28 3/4 - 32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

D.R.

long. seams

T.R.D.B.S.

Diameter of rivet holes in long. seams

1 3/32"

Pitch of rivets

9 1/8"

Lap of plates or width of butt straps

20 1/4"

Per centages of strength of longitudinal joint

rivets 84.6

plate 86.4

Working pressure of shell by rules

180 lbs

Size of manhole in shell end

16" x 12"

Size of compensating ring

dished

No. and Description of Furnaces in each boiler

Three Corrugated

Material

Steel

Outside diameter

44 1/2"

Length of plain part

top 9"

bottom 9"

Thickness of plates

crown 9/16"

bottom 9/16"

Description of longitudinal joint

weld.

No. of strengthening rings

yes

Working pressure of furnace by the rules

185 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back

15/16"

Top

3/4"

Bottom 3/4"

Pitch of stays to ditto: Sides

8 3/8" x 11 1/8"

Back

11 3/8" x 10 1/8"

Top

8 3/8" x 11 1/8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180 lbs

Material of stays

Steel

Diameter at smallest part

1.63"

Area supported by each stay

102 sq

Working pressure by rules

184 lbs

End plates in steam space:

Material

Steel

Thickness

1 3/8"

Pitch of stays

22 1/2" x 21 3/4"

How are stays secured

D. Nuts + W.

Working pressure by rules

182 lbs

Diameter at smallest part

3.28"

Area supported by each stay

490 sq

Working pressure by rules

180 lbs

Material of Front plates at bottom

Steel

Thickness

3/4"

Material of Lower back plate

Steel

Thickness

15/16"

Greatest pitch of stays

15" x 10 1/16"

Working pressure of plate by rules

181 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 3/4" x 4 3/8"

Material of tube plates

Steel

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

10.5"

Pitch across wide water spaces

15"

Working pressures by rules

182 lbs

Girders to Chamber tops: Material

Steel

Depth and

VERTICAL DONKEY BOILER

Manufacturers of Steel

Form with fields for No., Description, Made at, By whom made, When made, Where fixed, Working pressure, Date of test, No. of Certificate, Fire grate area, Description of Safety Valves, etc.

SPARE GEAR. State the articles supplied: - One Tail shaft, One propeller, Two each bolts & nuts for top & bottom ends & main bearings, one set of coupling bolts & nuts, valves for all pumps, assorted bolts, nuts & wire.

The foregoing is a correct description, NORTH EASTERN MARINE ENGINEERING CO LTD Manufacturer.

Table with columns for Dates of Survey while building, During progress of work in shops, and Total No. of visits.

Table with columns for Dates of Examination of principal parts, Material of Crank shaft, Tunnel shafts, and Steam Pipes.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under special survey the materials and workmanship are of good quality and the hydraulic test on the boilers proved satisfactory.

It is submitted that this vessel is eligible for THE RECORD + LMC 3.12.

Signature of William Butler, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Table with columns for The amount of Entry Fee, Special, Donkey Boiler Fee, and Committee's Minute.

Certificate (if required) to be sent to the Surveyors...

Rpt. 5a. Date of writing Report, No. in Survey Reg. Book, on the Master, Engines made at, Boilers made at, Registered Horse, MULTITUBULAR, (Letter for record), Boilers one, No. of Certificate, safety valves to ea, Are they fitted with, Smallest distance, Material of shell, Descrip. of riveting, Lap of plates, rules 123, boiler 2 pl, Description of long, plates: Material, Top 8 1/2 x 9 1/8, If s, smallest part 1 1/4, Pitch of stays 14 3/4, Area supported by, Lower back plate, Pitch of tubes 4, water spaces 13, girder at centre 2, Working pressure, separately, holes, Pitch, If stiffened with r, Working pressure, Dates of Survey while building, During work on board, GENERAL, The me, The boiler, It has been, been a sign, Survey Fee, Travelling Ex, Committee's

