

REPORT ON MACHINERY.

No. 26060.

TUE. MAR. 31. 1914

of writing Report

19

When handed in at Local Office

30. 3. 1914 Port of Sunderland.

in Survey held at Sunderland.

Date, First Survey Oct 2 1913. Last Survey 23 March 1914

Book.

on the *Steel S/S "Nigeria"*

(Number of Visits)

28

Gross

4762

Net

2872

ster

Built at *S' land.*

By whom built

J. L. Thompson & Sons Ltd

When built

1914

ines made at

S' land.

By whom made

J. Dickinson & Sons Ltd

when made

1914.

lers made at

"

By whom made

"

"

when made

1914.

istered Horse Power

Owners

International Line S.S. Co. (Marwood)

Port belonging to

Whitby

n. Horse Power as per Section 28

390

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

GINES, &c.—Description of Engines

Tri C.P. & A.

No. of Cylinders

3

No. of Cranks

3

n. of Cylinders

25 1/2, 42, 70

Length of Stroke

48

Revs. per minute

70

Dia. of Screw shaft

as per rule 14.4

Material of

W. I.

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

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

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

yes

Length of stern bush

5 ft

n. of Tunnel shaft

as per rule 12.86

as fitted 12 3/4

Dia. of Crank shaft journals

as per rule 13.5

as fitted 13 5/8

Dia. of Crank pin

13 5/8

Size of Crank webs

Patent

Dia. of thrust shaft under

lars

13 5/8

Dia. of screw

17.6

Pitch of Screw

16.6

No. of Blades

4

State whether moveable

f

Total surface

92 sq

n. of Feed pumps

2

Diameter of ditto

4

Stroke

25 1/2

Can one be overhauled while the other is at work

yes

n. of Bilge pumps

2

Diameter of ditto

4 1/2

Stroke

25 1/2

Can one be overhauled while the other is at work

yes

n. of Donkey Engines

4

SIZES of Pumps

10x10-2 dph 5x6 dph

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

3x5

In Holds, &c.

two 3 1/2" in each

Engine Room

4 of 3 1/2"

tunnel 2 1/2"

n. of Bilge Injections

1

sizes

5 1/2

Connected to condenser, or to circulating pump

C. P.

Is a separate Donkey Suction fitted in Engine room & 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

yes

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

3. 2. 1914

of Stern Tube

3. 2. 1914

Screw shaft and Propeller

4. 2. 1914

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

ILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spencer & Sons Ltd

S. B.

Total Heating Surface of Boilers

6300 sq

Is Forced Draft fitted

no

No. and Description of Boilers

3

Ordinary type

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

25. 2. 1914

n. of Certificate

3192

n. in each boiler be worked separately

yes

Area of fire grate in each boiler

56 sq

No. and Description of Safety Valves to

each boiler

2

Spring

Area of each valve

7.06"

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' 6"

Mean dia. of boilers

14.9"

Length

11 f

Material of shell plates

S

Thickness

1 5/32"

Range of tensile strength

28 1/2 - 32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

d r. lap

g. seams

T. R. A. B. S

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

8 9/16"

per centages of strength of longitudinal joint

rivets 92.18

plate 85.4

Working pressure of shell by rules

181

Size of manhole in shell

16" x 12"

Size of compensating ring

8 1/2" x 1 1/2"

No. and Description of Furnaces in each boiler

3

plain

Material

S

Length of plain part

top 78 1/2"

bottom 86"

Thickness of plates

crown 5 1/4"

bottom 6 1/4"

Description of longitudinal joint

weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

183

Combustion chamber plates: Material

S

Pitch of stays to ditto: Sides

9 1/2" x 9"

Back

9" x 10"

Top

9" x 9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

181

Material of stays

S

Diameter at smallest part

2.038"

Material

S

Thickness

1 1/2"

Pitch of stays

20 x 17"

How are stays secured

d nut

Working pressure by rules

184

Material of stays

S

Diameter at smallest part

6.1"

Thickness

7"

Material of Lower back plate

S

Thickness

3 3/8"

Greatest pitch of stays

10 x 14 1/2"

Working pressure of plate by rules

187

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 4 1/2"

Pitch across wide water spaces

1' 2 1/4"

Working pressures by rules

248

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

7 1/2" x 1"

Length as per rule

26 1/2"

Distance apart

9"

Number and pitch of stays in each

2 @ 9"

Working pressure by rules

185

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

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

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes

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 _____

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 & shaft. Coupling bolts & nuts 1 set
two main bearing bolts & nuts. 2 top and bottom end bolts & nuts Set of feed
and bilge pump valves. Air & fire pump valves. Ballast & feed pump
valves. Set of check valves. 2 Safety & escape valve spring. assorted
iron nuts & bolts

The foregoing is a correct description,

John Dickinson & Sons, Limited.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1913. Oct 2. Dec 3. 5. 11. 17. 24. Jan 7. 14. 20. 21. 28. Feb 3. 4. 9. 10. 12. 13
During erection on board vessel - - - 19. 21. 25. Mar 4. 5. 6. 7. 10. 11. 18. 23.
Total No. of visits (28) Is the approved plan of main boiler forwarded herewith Yes ✓

Dates of Examination of principal parts—Cylinders 2. Oct 1913 Slides 5 Oct. Covers 5 Oct. Pistons 5 Oct. Rods 5 Oct.

Connecting rods 11 Dec. Crank shaft 24 Dec. Thrust shaft 24 Dec. Tunnel shafts 24 Dec. Screw shaft 7 Jan. Propeller 7 Jan.

Stern tube 7 Jan. Steam pipes tested 4. 3. 14. Engine and boiler seatings 5. 3. 14. Engines holding down bolts 5. 3. 14.

Completion of pumping arrangements 23. 3. 1914. Boilers fixed 6. 3. 14. Engines tried under steam 7. 3. 14.

Main boiler safety valves adjusted 7. 3. 14. Thickness of adjusting washers PB f 3/16. a 1/4. CB f 3/16. a 1/4. SB f 5/16. a 5/16.

Material of Crank shaft S. Identification Mark on Do. R. J. F. W. S. Material of Thrust shaft S. Identification Mark on Do. R. J. F. W. S.

Material of Tunnel shafts S. Identification Marks on Do. R. J. F. Material of Screw shafts W. I. Identification Marks on Do. R. J. F.

Material of Steam Pipes C. ✓ Test pressure 400 lbs ✓

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

Special survey. Materials & workmanship good. Engines and
boilers examined under full steam & found satisfactory

It is submitted that this vessel is eligible for the record
in the Register Book of L. M. C 3-1914.

It is submitted that
this vessel is eligible for
THE RECORD. + L M C 3. 14.

J. J. Findlay
3/3/14

The amount of Entry Fee .. £ 3 : - : When applied for, 25. 3. 14
Special .. £ 39. 10 : :
Donkey Boiler Fee .. £ : : :
Travelling Expenses (if any) £ : : : 22. 4. 14

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

Committee's Minute FRI. APR. - 3. 1914

Assigned + L M C 3. 14