

REPORT ON MACHINERY

No. 10625

MAR 26 1920

Received at London Office

Date of writing Report

10

When handed in at Local Office

20.3.20

Port of

MIDDLESBRO

No. in Survey held at
Reg. Book.

Stockton-on-Tees

Date, First Survey

11th April 1919

Last Survey

15th March 1920

on the

Steel Screw Steamer TIBERTON

(S.S.N. 679)

Tons

Gross

Net

Master

Built at

Stockton

By whom built

Richardson Duck & Co

When built

1920

Engines made at

Stockton

By whom made

Messrs Blair & Co Ltd (N. 1908)

when made

1920

Boilers made at

Stockton

By whom made

Messrs Blair & Co Ltd

when made

1920

Registered Horse Power

Owners

Messrs R. Chapman & Son

Port belonging to

Newcastle

Nom. Horse Power as per Section 28

397

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

26-44-73

Length of Stroke

48

Revs. per minute

77

Dia. of Screw shaft

as per rule 14.7

Material of

iron

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

in one

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

tight fit

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

yes

Length of stern bush

Dia. of Tunnel shaft

as per rule 13.33

as fitted 13.5

Dia. of Crank shaft journals

as per rule 14.0

as fitted 14.2

Dia. of Crank pin

14.5

Size of Crank webs

28 x 9

Dia. of thrust shaft under

collars

14.5

Dia. of screw

17.6

Pitch of Screw

17.6

No. of Blades

4

State whether moveable

no

Total surface

975 sq ft

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

3

Sizes of Pumps

10 1/2 x 14 x 24

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

2 @ 9 1/2 x 7 x 18

In Engine Room

4 @ 3 1/2"

In Holds, &c.

2 @ 3 1/2" in each hold except aftermost

where one @ 3 1/2"

Tunnel with one @ 3"

No. of Bilge Injections

1

sizes

13"

Connected to condenser, or to circulating pump

yes

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

suctions to forward holds

How are they protected

wood ceiling

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

13.1.20

of Stern Tube

13.1.20

Screw shaft and Propeller

27.1.20

Is the Screw Shaft Tunnel watertight

yes, on hull plating

Is it fitted with a watertight door

yes

worked from

top platform

OILERS, &c.—(Letter for record)

(S)

Manufacturers of Steel

Messrs John Spencer & Son Ltd

2 S.B.

Total Heating Surface of Boilers

6066

Is Forced Draft fitted

no

No. and Description of Boilers

2 single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

5.12.19

No. of Certificate

6061

Can each boiler be worked separately

yes

Area of fire grate in each boiler

68.5

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

9.62

Pressure to which they are adjusted

185

Smallest distance between boilers on uptakes and bunkers or woodwork

3'-6"

Mean dia. of boilers

16'-9"

Length

11'-6"

Material of shell plates

steel

Thickness

1 1/2"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2 R. lap

long. seams

2 B-3 Riv

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 1/4"

Lap of plates or width of butt straps

20 1/2 x 1 1/2"

Per centages of strength of longitudinal joint

5 Ribs per pitch

rivets

89.0

plate

85.15

Working pressure of shell by rules

183

Size of manhole in shell

16" x 12"

Size of compensating ring

7 1/2" x 1 1/2"

No. and Description of Furnaces in each boiler

3 Dighton

Material

steel

Outside diameter

49 1/2"

Length of plain part

top

Thickness of plates

crown

12"

Description of longitudinal joint

Weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

190

Combustion chamber plates: Material

steel

Thickness: Sides

1/2"

Back

1/2"

Top

1/2"

Bottom

3/2"

Pitch of stays to ditto: Sides

8 1/2" x 10 1/2"

Back

9 1/2" x 9 1/2"

Top

9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

Material of stays

steel

Diameter at smallest part

1.99

Area supported by each stay

87.87

Working pressure by rules

204

End plates in steam space

yes

Material

steel

Thickness

1 1/2"

Pitch of stays

19 1/4" x 22 1/2"

How are stays secured

nuts & washers

Working pressure by rules

184

Material of stays

steel

Diameter at smallest part

7.85

Area supported by each stay

455

Working pressure by rules

180

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

1 1/2"

Greatest pitch of stays

15 1/2" x 9 1/2"

Working pressure of plate by rules

271

Diameter of tubes

3 1/2"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

steel

Thickness: Front

1 1/2"

Back

1 1/2"

Mean pitch of stays

9 5/8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

181

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8" x 2"

Length as per rule

32

Working pressure by rules

197

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

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

SPARE GEAR. State the articles supplied:— *Two each of connecting rod top end, bottom end and main bearing bolts and nuts: 3 crank shaft + 3 tunnel shaft coupling bolts and nuts: One set each of feed and bilge pump valves: 3 each of main and donkey check valves: One set each of H.P. M.P. ram bottom piston rings: assorted bolts and nuts, iron of various sizes, one cast iron propeller and minor gear as per specification: also ingot steel tail end shaft*

The foregoing is a correct description,
FOR BLAIR & CO. LIMITED.

Geo. Wattship

Manufacturer.

Dates of Survey while building
During progress of work in shops - - - *1919*
During erection on board vessel - - - *Apr. 11-15-17 May 1-5-7-9-15-17-21-23 Jun 2-4-6-11-13-16-20-23-25-7 Jul 13-14-15-15-23-25-31 Aug 5-7-11-13-15-28*
Total No. of visits *76*

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *3.7.19* Slides *31.7.19* Covers *3.7.19* Pistons *3.7.19* Rods *15.7.19*
Connecting rods *31.7.19* Crank shaft *11.7.19* Thrust shaft *11.4.19* Tunnel shafts *3.7.19* *iron-steel* *Range* *6.15.7.19* Screw shaft *23.1.20* Propeller *7.1.20*
Stern tube *15.12.19* Steam pipes tested *4.28.19* Engine and boiler seatings *13.1.20* Engines holding down bolts *4.2.20*
Completion of pumping arrangements *3.3.20* Boilers fixed *3.3.20* Engines tried under steam *3.3.20*
Main boiler safety valves adjusted *3.3.20* Thickness of adjusting washers *P.Br. 5-7/8 Stan 12h 5-1/16 B*
Material of Crank shaft *By steel* Identification Mark on Do. *7182* Material of Thrust shaft *By steel* Identification Mark on Do. *7182*
Material of Tunnel shafts *By steel* Identification Marks on Do. *7182* Material of Screw shafts *By steel* Identification Marks on Do. *7182*
Material of Steam Pipes *Lap welded steel* Test pressure *540*

Is an installation fitted for burning oil fuel *no* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *S.S. Peterston, Indt Rkt No 10543*

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 sound and good and on completion the engines, boilers and auxiliaries were examined under steam and all found satisfactory. The machinery is now in a good and safe working condition and renders the vessel eligible in my opinion to have the notation of LMC-3-20 in the Register Book*

It is submitted that
this vessel is eligible for
THE RECORD *+ LMC-3-20*

26/3/20
APR

Note:— This vessel is fitted with "Wireless" but not Electric Light

The amount of Entry Fee ... £ : :
Special ... £ *116-2-2*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, *25.3.1920*
When received, *27.3.1920*

Committee's Minute *TUE. MAR. 30 1920*

Assigned *+ LMC 3.20*

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



Lloyd's Register
Foundation