

REPORT ON MACHINERY

No. 66632

SAT. SEP. 19. 1914

Received at London Office

Date of writing Report 14th Sept. 14 When handed in at Local Office 17th Sept. 14

Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle

Date, First Survey 27th Feb. 1913Last Survey 11th Sept. 1914

Reg. Book.

12th day on the Machinery of S.S. Tahchee

(Number of Vistas 53)

Gross 6508

Net 4055

Master

Built at

Middalbro

By whom built

G. R. Dixon & Co. Ltd

When built 1914

Engines made at

Newcastle

By whom made

North Eastern Marine Eng. Co

When made

1914

Boilers made at

"

By whom made

"

when made

1914

Registered Horse Power

Owners

Tank Storage & Carriage Co

Port belonging to

Middalbro

Nom. Horse Power as per Section 28 526

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Quadruple

No. of Cylinders 4

No. of Cranks 4

Dia. of Cylinders 24", 35", 50" & 73" Length of Stroke 51"

Revs. per minute 70

Dia. of Screw shaft

as per rule 15 1/2"

Material of screw shaft

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

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 5'-5 1/2"

Dia. of Tunnel shaft

as per rule 13 1/2"

Dia. of Crank shaft journals

as per rule 14 1/2"

Dia. of Crank pin

14 3/8"

Size of Crank webs 22" x 9 1/4"

Dia. of thrust shaft under

collars 14 3/8"

Dia. of screw

18'-6"

Pitch of Screw

17'-6"

No. of Blades 4

State whether moveable

no

Total surface 105 5'

No. of Feed pumps 2

Diameter of ditto

7"

Stroke 24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto

4 1/2"

Stroke 28"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines 2

Sizes of Pumps

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

6" x 8" x 8"

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

In Engine Room 3 of 3 1/2"

In Holds, &c.

Oil cargo pumps

No. of Bilge Injections 1

size 5"

Connected to condenser, or to circulating pump

pump

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

none

How are they protected

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

24.6.14

of Stern Tube

4.7.14

Screw shaft and Propeller

3/11/14

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

J. Spencer & Sons

Total Heating Surface of Boilers 7125

Is Forced Draft fitted

Yes

No. and Description of Boilers

3

Single-ended

Working Pressure 220 lbs

Tested by hydraulic pressure to

440 lbs

Date of test

15/11/14 & 17/11/14

No. of Certificate

8673 & 8677

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

56 7/8

No. and Description of Safety Valves to

each boiler

2

Direct spring

Area of each valve

8.296

Pressure to which they are adjusted

225 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-6"

Mean dia. of boilers

14'-6 1/4"

Length

11'-9"

Material of shell plates

Steel

Thickness 1 3/8"

Range of tensile strength

28 3/4"-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams d. r. lap

long. seams

E. r. d. butt

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

9 7/8"

Lap of plates or width of butt straps

21 1/4"

Per centages of strength of longitudinal joint

rivets 88.7

plate 85.4

Working pressure of shell by rules

221.3 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

flange

No. and Description of Furnaces in each boiler

3

Single-ended

Material

Steel

Outside diameter

44 1/2"

Length of plain part

top 5'

Thickness of plates

bottom 5 1/8"

Description of longitudinal joint

welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

226 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

23 3/32"

Back

23 3/32"

Top

23 3/32"

Bottom

19 1/16"

Pitch of stays to ditto: Sides

9 7/8" x 8 7/8"

Back

9 7/8" x 8 7/8"

Top

9 7/8" x 8 7/8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

220 lbs

Material of stays

Steel

Diameter at smallest part

2.03

Area supported by each stay

80.86

Working pressure by rules

226 lbs

End plates in steam space

Material

Steel

Thickness

1 9/16"

Pitch of stays

25" x 20 1/2"

How are stays secured

d. n. w.

Material of stays

Steel

Diameter at smallest part

11.07

Area supported by each stay

512.5

Working pressure by rules

224 lbs

Material of Front plates at bottom

Steel

Thickness 1 1/16"

Material of Lower back plate

Steel

Thickness 3 1/32"

Greatest pitch of stays

14 1/2" x 8 7/8"

Working pressure of plate by rules

228 lbs

Diameter of tubes 2 1/2"

Pitch of tubes

3 3/4" x 3 3/4"

Material of tube plates

Steel

Thickness: Front

1 1/16"

Back

1 3/16"

Mean pitch of stays

7 1/2" x 7 1/2"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

233 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 3/4" x 2"

Length as per rule

36"

Distance apart

9 3/8"

Number and pitch of stays in each

3 of 8 7/8"

Working pressure by rules

220 lbs

Superheater or Steam chest; how connected to boiler

none

Can the superheater be shut off and the boiler worked

separately

Yes

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

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

Yes

Foundation

Foundation

Foundation

Foundation

Foundation

Foundation

Foundation

Foundation

21026-0128

IS A DONKEY BOILER FITTED? *No*If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:—

*Two top end & 2 bottom end bolts, 2 main bearing bolts
1 set of coupling bolts, 1 set of feed & bilge pump valves
a quantity of assorted bolts nuts & iron, 1 propeller shaft
1 set of top end & crank pin brasses, 1 valve spindle
1 eccentric strap, air & circulating pump rods complete &
minor details.*

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING CO., LTD.

G. Harrison Manufacturer.

Secretary.

Dates of Survey while building { During progress of work in shops -- 1913 Feb 27, Mar 28, Apr 23, 9, 10, 28, May 2, 5, 20, 27, Jun 23, 17, 18, Jul 4, 22, 25, Aug 29, 1914
During erection on board vessel -- 17, 30, 31, Aug 7, 11, 14, 15, 20, 21, 25, 26, Sep 7, 8, 10, 11
Total No. of visits 53

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 12/5/14 Slides 14/7/14 Covers 28/3/14 Pistons 3/4/14 Rods 22/7/14
Connecting rods 22/7/14 Crank shaft 2/9/13 Thrust shaft 27/5/13 Tunnel shafts ✓ Screw shaft 10/4/14 Propeller 3/3/14
Stern tube 18/6/14 Steam pipes tested 21/2/14 Engine and boiler seatings 31/7/14 Engines holding down bolts 21/8/14
Completion of pumping arrangements 10/9/14 Boilers fixed 21/8/14 Engines tried under steam 26/8/14
Main boiler safety valves adjusted 26/8/14 Thickness of adjusting washers P.P. 1/4" 3/16" F.P. 1/4" 3/16" S.P. 3/8" 3/16"
Material of Crank shaft *Steel* Identification Mark on Do. 25/5/14 Material of Thrust shaft *Steel* Identification Mark on Do. 2/6/13 C.C.
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. 19/5/14 C.C.
Material of Steam Pipes *Lapwelded iron* Test pressure 660 lbs
Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *S.S. "Tamaha"*

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

*The machinery of this vessel has been built under special survey, the materials used are good, and the workmanship is satisfactory, it has been properly fitted on board and secured, and the engines have been tried under full power. An oil fuel burning installation on the Walland System has been fitted in accordance with the requirements for oil over 150°F.
In my opinion this vessel is eligible for the record of L.M.C. 9.14. fitted for oil fuel over 150°F.*

It is submitted that

this vessel is eligible for

THE RECORD + L.M.C. 9.14.

Fitted for oil fuel 9.14 F.P. above 150°F. *W.D. 24/9/14*

The amount of Entry Fee ... £ 3 :
Special ... £ 46 : 6
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for, SEP 18 1914

When received, 25/9/14

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

Committee's Minute FRI SEP 25 1914

Assigned *+ Lab 9 14**Fitted for oil fuel 9.14 F.P. above 150°F.*

MACHINERY CERTIFICATE



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Foundation