

REPORT ON MACHINERY.

No. 26106

THU. MAY. 14. 1914

TUE. JUN. 2 - 1914

Date of writing Report 12-5-1914 When handed in at Local Office 13-5-1914 Port of Sunderland

No. in Survey held at Reg. Book.

Date, First Survey 27 Aug. 1913 Last Survey 6 May 1914

on the New Steel S. S. "Melania"

Master

Built at Stockton

By whom built

Craig Taylor & Co. Ltd. 1914

Engines made at

Sunderland

By whom made

North Eastern Marine Eng Co. Ltd. when made 1914

Boilers made at

Sunderland

By whom made

North Eastern Marine Eng Co. Ltd. when made 1914

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

515

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders

27" x 45" x 14"

Length of Stroke

18"

Revs. per minute

69

Dia. of Screw shaft

as per rule 14.8"

Material of screw shaft

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

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

5'-4 1/2"

Dia. of Tunnel shaft

as per rule 12.4"

Dia. of Crank shaft journals

as per rule 14.04"

Dia. of Crank pin

11 1/8"

Size of Crank webs

20 1/2" x 8 1/2"

Collars

14 1/8"

Dia. of screw

14 1/8"

Pitch of Screw

16'-9"

No. of Blades

4

State whether moveable

no

Total surface

100 sq

No. of Feed pumps

Two

Diameter of ditto

4"

Stroke

26"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

Two

Diameter of ditto

4 1/2"

Stroke

26"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

in Eng. Room

Sizes of Pumps

10 1/2" x 10 1/2" x 10 1/2" 2 1/2" x 2 1/2" x 2 1/2"

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

In Engine Room 10 1/2" well 2 1/2" x 2 1/2" x 2 1/2" 2 1/2" x 2 1/2" x 2 1/2"

In Holds, &c. See oil pumping arrangement

No. of Bilge Injections

One size 3 1/2"

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

4.3.14

of Stern Tube

15.4.14

Screw shaft and Propeller

29.4.14

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

yes

worked from

yes

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

J. Spencer & Sons Ltd. Newburn

Total Heating Surface of Boilers

1503 sq

Is Forced Draft fitted

yes

No. and Description of Boilers

Three single ended.

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

23-12-13

No. of Certificate

3181

Can each boiler be worked separately

yes

Area of fire grate in each boiler

5'-4 1/2" x 5'-4 1/2"

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

9.62 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

18"

Mean dia. of boilers

15'-9"

Length

11'-1 1/2"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

28 1/2" x 32 1/2"

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

D.R.

long. seams

T.R.D.P. 2

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

9 1/8"

Lap of plates or width of butt straps

19 3/4"

Per centages of strength of longitudinal joint

rivets 87.3

plate 86.24

Working pressure of shell by rules

180 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

9 1/2" x 1 1/2"

No. and Description of Furnaces in each boiler

Three daylight

Material

Steel

Outside diameter

3'-11 1/4"

Length of plain part

top

Thickness of plates

crown 1 3/8"

bottom 1 1/4"

Description of longitudinal joint

weld.

No. of strengthening rings

Working pressure of furnace by the rules

180 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

3/8"

Back

3/8"

Top

3/8"

Bottom

3/8"

Pitch of stays to ditto: Sides

11 3/8" x 10 1/4"

Back

11 3/8" x 10 1/4"

Top

11 3/8" x 10 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180 lbs

Material of stays

Steel

Area at smallest part

2.43 sq

Area supported by each stay

116.6 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"

How are stays secured

D.N. Wash.

Working pressure by rules

180.5 lbs

Material of stays

Steel

Diameter at smallest part

8.29"

Area supported by each stay

47.25 sq

Working pressure by rules

182.4 lbs

Material of Front plates at bottom

Steel

Thickness

3/4"

Greatest pitch of stays

11 3/8" x 10 1/4"

Working pressure of plate by rules

186 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 3/4" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

10 1/4"

Pitch across wide water spaces

11 1/2"

Working pressures by rules

185 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

20 1/2" x 9"

Length as per rule

34"

Distance apart

11 3/8"

Number and pitch of stays in each

2 @ 10 1/4"

Working pressure by rules

182 lbs

Superheater or Steam chest; how connected to boiler

Independent

Can the superheater be shut off and the boiler worked

separately

yes

Diameter

Subular

Length

22 mm.

Thickness of shell plates

22 mm.

Material

Solid

Description of longitudinal joint

Drawn

Diam. of rivet

holes

Pitch of rivets

yes

Working pressure of shell by rules

tested by hydraulic pressure to 400 lbs.

Diameter of flue

Material of flue plates

Steel

Thickness

yes

Are they fitted with easing gear

yes

If stiffened with rings

yes

Distance between rings

yes

Working pressure by rules

yes

End plates: Thickness

yes

How stayed

yes

Working pressure of end plates

Area of safety valves to superheater

1.44 sq

Are they fitted with easing gear

yes

Admitted 185 lbs

yes

yes

yes

Working pressure of end plates

Area of safety valves to superheater

1.44 sq

Are they fitted with easing gear

yes

