

REPORT ON MACHINERY

No. 27326
SAT. SEP. 7. 1918

Received at London Office

Date of writing Report

19

When handed in at Local Office

- 6 SEP 1918

Port of

Sunderland

in. Survey held at

Sunderland

Date, First Survey

4 July 1917

Last Survey

16th Oct 1918

g. Book.

on the 45 WAR SIMOOM

(Number of Visits 145)

Master

Built at W. Hartwood

By whom built

Dovine & Co Ltd (596)

Tons

Gross

Net

When built 1918

Engines made at Sunderland

By whom made

H. Clark & Co (1066)

when made 1918

Boilers made at Sunderland

By whom made

H. Clark & Co (1066)

when made 1918

Registered Horse Power

Owners

Shipping Controller

Port belonging to

London

nom. Horse Power as per Section 28

429

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

25, 41, 18

Length of Stroke

45

Revs. per minute

76

Dia. of Screw shaft

as per rule 13.58
as fitted 14.5

Material of screw shaft

Iron

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

fit full length

If two

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

Length of stern bush

5-0

Dia. of Tunnel shaft

as per rule 12.4
as fitted 12.5

Dia. of Crank shaft journals

as per rule 13.03
as fitted 13.4

Dia. of Crank pin

13.4

Size of Crank webs

8 1/2 x 24 1/2

Dia. of thrust shaft under

collars

13 1/4

Dia. of screw

16.0

Pitch of Screw

16.3

No. of Blades

4

State whether moveable

yes

Total surface

75.5

No. of Feed pumps

2

Diameter of ditto

3 1/2

Stroke

24

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2

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 12 1/2 x 2 1/2

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

In Engine Room

Four 3" Tunnel Lull one 2 1/2"

In Holds, &c. Two 3" in each hold & two Suction 2 1/2" in 1st hold.

No. of Bilge Injections

2

sizes

each 7 1/2"

Connected to condenser, on 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

yes

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

yes

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

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

no

worked from across by trunk

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Spencer & Sons

Total Heating Surface of Boilers

1321

Is Forced Draft fitted

yes

No. and Description of Boilers

3 Single End

Working Pressure

150 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

8.7.18

No. of Certificate

3484

Can each boiler be worked separately

yes

Area of fire grate in each boiler

52

No. and Description of Safety Valves to

each boiler

2 Spring valves

Area of each valve

8.29

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

no bunkers in way of boilers

Mean dia. of boilers

14.0

Length

11.7

Material of shell plates

S

Thickness

1 1/2

Range of tensile strength

28 3/4 to 33 1/2

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

lap 1/2"

long. seams

lap 1/2"

Diameter of rivet holes in long. seams

1 1/16

Pitch of rivets

8 1/2

Temp. of plates on width of butt straps

18"

Per centages of strength of longitudinal joint

rivets 86
plate 86

Working pressure of shell by rules

187 lbs

Size of manhole in shell

16 x 12

Size of compensating ring

flange in

No. and Description of Furnaces in each boiler

3 Single End

Material

S

Outside diameter

3.7"

Length of plain part

top
bottom

Thickness of plates

crown 3 1/2
bottom 3 3/4

Description of longitudinal joint

welded

No. of strengthening rings

-

Working pressure of furnace by the rules

190

Combustion chamber plates: Material

S

Thickness: Sides

1/4"

Back

3/4"

Top

1/2"

Bottom

1/2"

Pitch of stays to ditto: Sides

9 x 9 1/2"

Back

10 3/4 x 9 1/2"

Top

9 x 9 1/2"

If stays are fitted with nuts or riveted heads

welded inside

Working pressure by rules

193

Material of stays

S

Area at smallest part

2.03

Area supported by each stay

84.4

Working pressure by rules

210

End plates in steam space:

Material

S

Thickness

1 1/2"

Pitch of stays

25 3/4 x 19 1/2"

How are stays secured

welded

Working pressure by rules

181

Material of stays

S

Area at smallest part

8.29

Area supported by each stay

463

Working pressure by rules

186

Material of Front plates at bottom

S

Thickness

3 1/2"

Material of Lower back plate

S

Thickness

2 1/2"

Greatest pitch of stays

13 1/2 x 9 1/2"

Working pressure of plate by rules

186

Diameter of tubes

2 3/4"

Pitch of tubes

4 x 4"

Material of tube plates

S

Thickness: Front

3 1/2"

Back

3/4"

Mean pitch of stays

10"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

184

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

10" x 1 1/2"

Length as per rule

2-11 1/2"

Distance apart

9 3/8"

Number and pitch of stays in each

3, 9"

Working pressure by rules

186

Steam dome: description of joint to shell

-

% of strength of joint

-

Diameter

Thickness of shell plates

-

Material

-

Description of longitudinal joint

-

Diam. of rivet holes

-

Pitch of rivets

-

Working pressure of shell by rules

-

Crown plates

-

Thickness

-

How stayed

-

SUPERHEATER. Type

-

Date of Approval of Plan

-

Tested by Hydraulic Pressure to

-

Date of Test

-

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

-

Diameter of Safety Valve

-

Pressure to which each is adjusted

-

Is Easing Gear fitted

-

5410-657900-647900

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

Two top end, two bottom end connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts, one set fuel & bilge pump valves, assorted bolts and nuts, 2000 of various sizes, one propeller.

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 19/7, Jul 4, Nov 5, 29, 30 Dec 21, Jan 25, Feb 5, 18, 20 Mar 28, Apr 3, 4, 10, 15, 18, 22, 25, May 6, 14, 27.
During erection on board vessel -- Jun 6, 11, 13, 19, 24, 29, Jul 8, 16, 24, Aug 7, 15, 21, 24, 28, 30
Total No. of visits at West Npt: 1918, July 23, Aug 1, Sep 17, 18, 19, 30, Oct 4, 8, 10, 16.

Is the approved plan of main boiler forwarded herewith

yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 29.7.18 Slides 16.7.18 Covers 16.7.18 Pistons 29.7.18 Rods 13.6.18
Connecting rods 16.7.18 Crank shaft 29.7.18 Thrust shaft 24.6.18 Tunnel shafts 24.6.18 Screw shaft 16.7.18 Propeller 16.7.18
Stern tube 7.8.18 Steam pipes tested 21.8, 24.8.18 Engine and boiler seatings 15.8.18 Engines holding down bolts 15.8.18
Completion of pumping arrangements 30.8.18 Boilers fixed 30.8.18 Engines tried under steam 30.8.18
Completion of fitting sea connections 2.9.18 Stern tube 15.8.18 Screw shaft and propeller 15.8.18
Main boiler safety valves adjusted 30.8.18 Thickness of adjusting washers 5/16, 1/2, 3/4, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 3 3/4, 4, 4 1/4, 4 1/2, 4 3/4, 5, 5 1/4, 5 1/2, 5 3/4, 6, 6 1/4, 6 1/2, 6 3/4, 7, 7 1/4, 7 1/2, 7 3/4, 8, 8 1/4, 8 1/2, 8 3/4, 9, 9 1/4, 9 1/2, 9 3/4, 10, 10 1/4, 10 1/2, 10 3/4, 11, 11 1/4, 11 1/2, 11 3/4, 12, 12 1/4, 12 1/2, 12 3/4, 13, 13 1/4, 13 1/2, 13 3/4, 14, 14 1/4, 14 1/2, 14 3/4, 15, 15 1/4, 15 1/2, 15 3/4, 16, 16 1/4, 16 1/2, 16 3/4, 17, 17 1/4, 17 1/2, 17 3/4, 18, 18 1/4, 18 1/2, 18 3/4, 19, 19 1/4, 19 1/2, 19 3/4, 20, 20 1/4, 20 1/2, 20 3/4, 21, 21 1/4, 21 1/2, 21 3/4, 22, 22 1/4, 22 1/2, 22 3/4, 23, 23 1/4, 23 1/2, 23 3/4, 24, 24 1/4, 24 1/2, 24 3/4, 25, 25 1/4, 25 1/2, 25 3/4, 26, 26 1/4, 26 1/2, 26 3/4, 27, 27 1/4, 27 1/2, 27 3/4, 28, 28 1/4, 28 1/2, 28 3/4, 29, 29 1/4, 29 1/2, 29 3/4, 30, 30 1/4, 30 1/2, 30 3/4, 31, 31 1/4, 31 1/2, 31 3/4, 32, 32 1/4, 32 1/2, 32 3/4, 33, 33 1/4, 33 1/2, 33 3/4, 34, 34 1/4, 34 1/2, 34 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