

REPORT ON MACHINERY.

No. 27366

SAT NOV 2 1918

Received at London Office

of writing Report

19

When handed in at Local Office

1 NOV 1918

Port of Sunderland

Survey held at Sunderland

Date, First Survey 22 Jan 18

Last Survey 31 October 1918

(Number of Visits 41)

on the

S.S. "WAR ZEPHYR"

Master Stonehouse

Built at Sunderland

By whom built J Priestman & Co (266)

Tons } Gross 3118
Net 1870
When built 1918

Engines made at Sunderland

By whom made G. Clark & Co (1075)

when made 1918

Boilers made at Sunderland

By whom made G. Clark & Co (1075)

when made 1918

Registered Horse Power

Owners Shipping Controller

Port belonging to London

Net 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

No. of Cylinders 25, 41, 68

Length of Stroke 45

Revs. per minute 76

Dia. of Screw shaft as per rule 13.55

as fitted 14.5

Material of screw shaft 2 in

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

the propeller boss yes If the liner is in more than one length are the joints burned —

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 —

If two

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

Length of stern bush 5'-0"

No. of Tunnel shaft as per rule 12.41

Dia. of Crank shaft journals as per rule 13.03

as fitted 13.5

Dia. of Crank pin 13.5

Size of Crank webs 8 3/8 x 20 1/2

Dia. of thrust shaft under

bars 13 1/4

Dia. of screw 16-0

Pitch of Screw 16-3

No. of Blades 4

State whether moveable no

Total surface 75.9

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 9 1/2 x 7 x 16

10 1/2 x 12 1/2 x 21

9 1/2 x 7 x 16

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

Engine Room 3 @ 3" 2 in Eng. Room 2 @ 3" in B. Room

In Holds, &c. 2 in for 1 main 1 main A holds 2 each @ 3"

in Main after hold 2 @ 3" 2 in after hold 2 @ 2 1/2" 2 in hold with 1 @ 3 1/2" 2 in tunnel with 1 @ 2 1/2"

No. of Bilge Injections 2

sizes 8"

Connected to condensers 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 main disch below

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

Are all pipes 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 —

worked from across by trunk

ROLLERS, &c.—(Letter for record 5)

Manufacturers of Steel

Total Heating Surface of Boilers 6321.9

Is Forced Draft fitted yes

No. and Description of Boilers 2 Single Ended

Working Pressure 180 lbs

Tested by hydraulic pressure to 360 lbs

Date of test 1.8.18

No. of Certificate 3489

Can each boiler be worked separately yes

Area of fire grate in each boiler 52.9

No. and Description of Safety Valves to

each boiler 2 Spring valves

Area of each valve 8.29 sq in

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 way boiler

Mean dia. of boilers 14.0

Length 11.7

Material of shell plates S

Thickness 1 1/8

Range of tensile strength 28 3/4 - 32

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams lap & b

g. seams 1. H. K. riv.

Diameter of rivet holes in long. seams 1 3/16

Pitch of rivets 8 1/2

Lap of plates or width of butt straps 18"

Percentages of strength of longitudinal joint

rivets 86

Working pressure of shell by rules 187

Size of manhole in shell 16 x 12

No. of compensating ring None

No. and Description of Furnaces in each boiler 3 Single

Material S

Outside diameter 3-7

Length of plain part

top —

bottom —

Thickness of plates

crown 3 1/2

bottom 3 1/2

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 1/8

Back 3/4

Top 1 1/8

Bottom 1 1/8

Each of stays to ditto: Sides 9 x 9 3/8

Back 10 3/8 x 9 1/2

Top 9 x 9 3/8

If stays are fitted with nuts or riveted heads nuts outside

Working pressure by rules 193

Material of stays S

Area at smallest part 2.03 sq in

Area supported by each stay 84.4

Working pressure by rules 216

End plates in steam space

Material S

Thickness 1 1/2

Pitch of stays 23 1/2 x 9 1/2

How are stays secured by nuts & washers

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 3/32

Material of Lower back plate S

Thickness 2 1/2

Greatest pitch of stays 13 1/2 x 9

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

Each 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 2-1 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 —

Material —

Thickness of shell plates —

Material —

Description of longitudinal joint —

Diam. of rivet holes —

Each 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 —

No. of Test —

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

No. of Safety Valve —

Pressure to which each is adjusted —

Is Easing Gear fitted —

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

8100-25114

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 rods bolts and nuts, two main bearing bolts, one set coupling bolts, one set feed and trip pump valves, assorted bolts and nuts, Iron of various sizes, one propeller

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED.

James C. Clark Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1918 Jan 22 Feb 13 28 Mar 7 11 Apr 4 10 15 18 22 25 May 6 14 27 Jun 3 6 11 13 19 24 Jul 8 10 16 20 29 Aug 7
During erection on board vessel - - - 7 Sep 3 4 10 13 16 19 20 25 Oct 1 4 8 29 30 31
Total No. of visits (41) Is the approved plan of main boiler forwarded herewith 410

Dates of Examination of principal parts—Cylinders 24.6.18 Slides 13.6.18 Covers 27.5.18 Pistons 27.5.18 Rods 7.8.18
Connecting rods 29.7.18 Crank shaft 3.9.18 Thrust shaft 3.9.18 Tunnel shafts 3.9.18 Screw shaft 29.7.18 Propeller 3.9.18
Stern tube 16.7.18 Steam pipes tested 1.10.18 Engine and boiler seatings 25.9.18 Engines holding down bolts 25.9.18
Completion of pumping arrangements 4.10.18 Boilers fixed 4.10.18 Engines tried under steam 4.10.18
Completion of fitting sea connections 3.9.18 Stern tube 3.9.18 Screw shaft and propeller 25.9.18
Main boiler safety valves adjusted 4.10.18 Thickness of adjusting washers 27.5.18 15 32 5 32 11 32 13 32 15 32 17 32 19 32 21 32 23 32 25 32 27 32 29 32 31 32
Material of Crank shaft Iron Identification Mark on Do. 1075 GAH Material of Thrust shaft Iron Identification Mark on Do. 1075 GAH
Material of Tunnel shafts Iron Identification Marks on Do. 1075 GAH Material of Screw shafts Iron Identification Marks on Do. 1075 GAH
Material of Steam Pipes Iron Test pressure 540 1/2 lb
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 410 If so, state name of vessel C Type.

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 under the vessel's slip in my opinion to have need of + L.M.C. 10.18.

The auxiliary feed pump was found not to be working quite satisfactorily and it was recommended that same should be landed on vessel's arrival in London in a few days. See letter to Secretary 31st Oct. 1918.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.18 F.D.

For endorsement see Reg. Rpt. No. 16966.

4-11-18

The amount of Entry Fee ... £ : : When applied for.
Special ... £ 69: 5: 9 31.10.18
Donkey Boiler Fee ... £ : : When received.
Travelling Expenses (if any) £ : : 15/11/18

Engine Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 20 NOV. 1918

Assigned + L.M.C. 10.18 on Reg Rpt 16966