

REPORT ON MACHINERY.

No. 27366

SAT NOV 2 1918

Received at London Office

Date of writing Report 10 When handed in at Local Office 11 NOV 1918 Port of 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
 Milers made at Sunderland By whom made G. Clark & Co (1075) when made 1918
 Registered Horse Power Owners Shipping Controller Port belonging to London
 (Reserve fund £60.)
 Net Horse Power as per Section 28 429 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

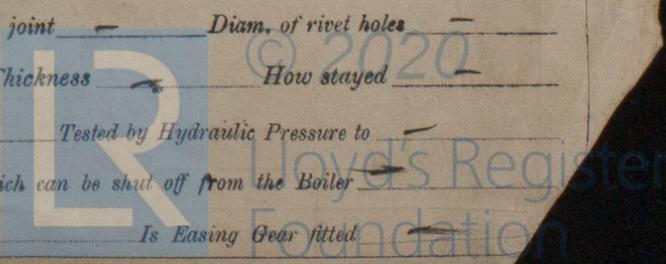
ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 No. of Cylinders 25, 41, 68 Length of Stroke 45 Revs. per minute 76 Dia. of Screw shaft as per rule 13.5 Material of screw shaft 2 1/2
 as fitted 14.5
 Is the screw shaft fitted with a continuous liner the whole length of 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 no 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 no Length of stern bush 5'-0"
 No. of Tunnel shaft as per rule 12.4 Dia. of Crank shaft journals as per rule 13.03 Dia. of Crank pin 13 1/4 Size of Crank webs 8 3/8 x 20 1/2 Dia. of thrust shaft under
 as fitted 12 1/2 as fitted 13 1/4
 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 18, 10 1/2 x 12 1/2 x 21, 9 1/2 x 7 x 18 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3 @ 3" In Eng. Room 2 @ 3" in B. Room In Holds, &c. In fore 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 no
 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 no How are they protected no
 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 access by trunk

BOILERS, &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 no bunkers in Ex. 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 Exp dt
 Longitudinal seams A.H. & 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
 Plate 86
 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 3 1/2 Thickness of plates crown 3 1/2 Description of longitudinal joint welded No. of strengthening rings no
 bottom 3 1/2 bottom 3 1/2
 Working pressure of furnace by the rules 190 Combustion chamber plates: Material S Thickness: Sides 1/16 Back 3/4 Top 1/16 Bottom 1/16
 Pitch of stays to ditto: Sides 9 + 9 3/8 Back 10 3/8 x 9 1/2 Top 9 + 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 1/32 Pitch of stays 23 3/4 x 9 1/2 How are stays secured A.H. & riv. 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 + 4 Material of tube plates S Thickness: Front 3/32 Back 3/4 Mean pitch of stays 10
 Distance 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 no % of strength of joint no
 Diameter no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no
 No. of rivets no Working pressure of shell by rules no Crown plates no Thickness no How stayed no

SUPERHEATER. Type no Date of Approval of Plan no Tested by Hydraulic Pressure to no
 No. of Test no Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler no
 Diameter of Safety Valve no Pressure to which each is adjusted no Is Easing Gear fitted no

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

8100-2511M



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 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 12 28 Mar 7 11 Apr 4 10 15 18 22 25 May 6 14 27 Jun 3 6 11 13 19 24 Jul 9 10 16 20 29 Aug 6
{ 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 (4) Is the approved plan of main boiler forwarded herewith *YLO*

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 *Str 13 1/4 P 15 1/32 S 11 1/32 Cnt 13 1/2 P 13 1/32 S 7 1/32 Pnt 13 1/2 P 13 1/32 S 5 1/32*
Material of Crank shaft *Iron* Identification Mark on Do. *1075 GAH* Material of Thrust shaft 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 psi*

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 *YLO* 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 fuel pump was found not to be working quite satisfactorily and it was recommended that same should be repaired 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 REDUCED + L.M.C. 10.18 F.D.

J.C. Clark
11-11-18

For endorsement see Reg. Rpt. No. 16966.

W. H. H. H. H.
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £	:	:	When applied for.
Special ... £	69	5	9 31.10.1918
Donkey Boiler Fee ... £	:	:	When received.
Travelling Expenses (if any) £	:	:	15/11/18

Committee's Minute WED. 20 NOV. 1918

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



SUNDERLAND
Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.