

REPORT ON MACHINERY.

No. 27063

Received at London Office THU SEP 27 1917

Date of writing Report 12-9-17 When handed in at Local Office 12-9-17 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 13 June 16 Last Survey 11-9-1917
Reg. Book. on the R.F.A. "CELEROL" (Number of Volls 111) Gross 2649 Tons Net 1136

Master Mills Built at Sunderland By whom built Shor. Bros. Ltd (S/N 410) When built 1917

Engines made at Sunderland By whom made George Blunk Ltd (N° 1053) when made 1917

Boilers made at Sunderland By whom made George Blunk Ltd (N° 1053) when made 1917

Registered Horse Power 543 Owners Lord Comers of Admiralty Port belonging to London

Com. Horse Power as per Section 28 543 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26" 42" 70" Length of Stroke 45 Revs. per minute 100 Dia. of Screw shaft as per rule 14.097" Material of steel
as fitted 15 3/8" screw shaft

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 turned — 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
liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 6'-1 1/2"

Dia. of Tunnel shaft as per rule 13.195" Dia. of Crank shaft journals as per rule 13.834" Dia. of Crank pin 14 3/8" Size of Crank webs 23 1/4 x 9 Dia. of thrust shaft under
collars 14 3/8" Dia. of screw 15-6" Pitch of Screw 16-3" No. of Blades 4 State whether moveable no Total surface 77 ft

No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 26" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/4" Stroke 26" Can one be overhauled while the other is at work yes

No. of Donkey Engines 4 Sizes of Pumps 2 @ 12 & 9 x 12 1 @ 8 & 8 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 @ 3 1/2" In Holds, &c. Stokehold - 2 @ 3 1/2"

No. of Bilge Injections 2 sizes 10" Connected to condenser, or to circulating pump to 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 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 non discharge below, all this 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 oil pipes only 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 14-3-17 of Stern Tube 14-3-17 Screw shaft and Propeller 24-4-17

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door no entered worked from deck

OILERS, &c.—(Letter for record 5) Manufacturers of Steel John Spence & Sons Ltd

Total Heating Surface of Boilers 8430 ft Is Forced Draft fitted yes No. and Description of Boilers three single ended marine

Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 5-3-17 No. of Certificate 3388

Can each boiler be worked separately yes Area of fire grate in each boiler oil fuel - none No. and Description of Safety Valves to
each boiler two direct spring Area of each valve 12.56 ft Pressure to which they are adjusted 205 Are they fitted with easing gear yes

Smallest distance between boilers on uptakes and bunkers on woodwork 22" Mean dia. of boilers 15-9" Length 11-9" Material of shell plates steel

Thickness 1 1/2" Range of tensile strength 29-32 1/2" Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR

Long. seams DRS. TR Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10 1/16" Lap of plates or width of butt straps 22 1/8"

Per centages of strength of longitudinal joint 86.6 Working pressure of shell by rules 217 Size of manhole in shell 16 x 12"

Size of compensating ring in shell 11 x 1 3/16" No. and Description of Furnaces in each boiler 3 main board Material steel Outside diameter 4'-2 1/2"

Length of plain part top bottom Thickness of plates top bottom 4 1/4" Description of longitudinal joint welded No. of strengthening rings —

Working pressure of furnace by the rules 205 Combustion chamber plates: Material steel Thickness: Sides 6 1/4" Back 3 1/2" Top 4 5/8" Bottom 1"

Pitch of stays to ditto: Sides 9 1/8 x 9 1/4" Back 10 1/8 x 8 5/8" Top 9 1/4 x 9" If stays are fitted with nuts or riveted heads nut in ends Working pressure by rules 202

Material of stays steel Diameter at smallest part 2.030" Area supported by each stay 44.60" Working pressure by rules 208 End plates in steam space

Material steel Thickness 1 1/16" Pitch of stays 22 x 20 3/4" How are stays secured DN Working pressure by rules 202 Material of stays steel

Diameter at smallest part 8.205" Area supported by each stay 420.0" Working pressure by rules 204 Material of Front plates at bottom steel

Thickness 1" Material of Lower back plate steel Thickness 1" Greatest pitch of stays 16 x 8 5/8" Working pressure of plate by rules 208

Diameter of tubes 2 1/2" Pitch of tubes 3 5/8 x 3 3/4" Material of tube plates steel Thickness: Front 1" Back 1 1/16" Mean pitch of stays 9 1/4"

Pitch across wide water spaces 13 1/2" Working pressures by rules 210 Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 2 @ 8 5/8 x 7 1/8" Length as per rule 3-9 1/4" Distance apart 9" Number and pitch of stays in each 2 @ 9 1/4"

Working pressure by rules 202 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
separately — 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 — Material of flue plates — Thickness —

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 —

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two top and bottom end bolts and nuts, four main bearing bolts and nuts, one set of coupling bolts, two sets of feed and bilge pump valves, iron and bolts of various sizes, one air pump, one eccentric rod and strap, one piston rod, crosshead and sliders, one slide spindle, one pair of main bearings, one pair of top and bottom end bearings, three oil fuel burners and a large quantity of spare engine parts for every auxiliary in the machinery space.

A spare screw shaft & propeller has been made but is not carried in the vessel. spare crankshaft in the vessel

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED.

W. S. G. MULL Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1916. Jan 13, 23, 28 Feb 5, 14, 21, 28 Aug 14, 29 Sep 8, 14, 29 Oct 4, 5, 13, 19, 30 Nov 9, 14, 21, 27, 29 Dec 1, 5, 7, 13, 28 Jan 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Feb 2, 3, 20, 28, 29, 30, 31 Mar 2, 3, 4, 5, 13, 14, 16, 17, 18, 20, 24, 27, 30 Apr 2, 3, 20, 28, 29, 30, 31 May 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Jun 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Jul 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Aug 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Sep 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Oct 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Nov 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Dec 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 Total No. of visits (111)

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 13-2-17 Slides 1-12-16 Covers 19-10-16 Pistons 29-11-16 Rods 26-3-17

Connecting rods 9-3-17 Crank shaft 2-2-17 Thrust shaft 22-2-17 Tunnel shafts 22-2-17 Screw shaft 22-2-17 Propeller 16-3-17

Stern tube 13-2-17 Steam pipes tested 2, 4, 5 July 1917 Engine and boiler settings 20-2-17 Engines holding down bolts 1-6-17

Completion of pumping arrangements 10-9-17 Boilers fixed 18-5-17 Engines tried under steam 11-9-17

Main boiler safety valves adjusted 30-8-17 Thickness of adjusting washers For L.P. 2 1/2" 3 1/2" A.P. 1 1/2" 1 1/2" A.S. 1 1/2" 1 1/2"

Material of Crank shaft S.M. 1 Steel Identification Mark on Do. 2296 N.W. Material of Thrust shaft S.M. 1 Steel Identification Mark on Do. 2296 N.W.

Material of Tunnel shafts S.M. 1 Steel Identification Marks on Do. 2296 N.W. Material of Screw shafts S.M. 1 Steel Identification Marks on Do. 2296 N.W.

Material of Steam Pipes Solid drawn steel Test pressure 600 lbs per sq. in.

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 no If so, state name of vessel ✓

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

The materials and workmanship are good.

The machinery has been constructed under special survey and is eligible in my opinion for classification and the records + LMC 9.17. Fitted for oil fuel 9.17 F.P. above 150° Feh

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.17. F.D.

Fitted for oil fuel 9.17. F.P. above 150°F

The amount of Entry Fee ... £ : : When applied for, 20.9.1917
Special ... £ 100 : = :
Donkey Boiler Fee ... £ : : When received, 9/10/17
Travelling Expenses (if any) £ : : 10/10/17

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

Committee's Minute.

Assigned

+ LMC 9.17
Fitted for oil fuel 9.17
F.P. above 150°F. F.D.



© 2020

Lloyd's Register Foundation

Rpt. 13.

RE

Port of S

No. in Reg. Book: on the Built

Owners

Yard No. 410

DESCRIPTION C

Two Com Compoun each of Capacity of, Dyna

Where is Dynam

Position of Main

Positions of aux as follows: - 1 light 1-Port One auxi 1-Steering Tee

If fuses are fitte

circuits

If vessel is wirea

Are the fuses of

Are all fuses fitt

are permane

Are all switches

Total number of Searchlight

A. Account

B. Y. A. Reflec

C. Navigatio

D. Wireless

E. Eng. & Boiler

2 Mast he

2 Sic

4

If arc lights, wha

Where are the su

DESCRIPTION C

Main cable carryin

Branch " "

Branch cables car

Branch cables car

" "

Leads to lamps car

Cargo light cables o

DESCRIPTION C

Joints in cables, ho

Are all the joints o

positions, non

Are there any join

How are the cable

to Bulk

SUNDERLAND.

Certificates (if required) to be sent to

The Surveys are requested not to write on or below the space for Committee's Minute.