

# REPORT ON MACHINERY.

No. 10802.

Received at London Office

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Date of writing Report 8<sup>th</sup> Nov. 1920 When handed in at Local Office 14<sup>th</sup> Dec. 1920 Port of Southampton

To. in Survey held at Portsmouth Date, First Survey 14<sup>th</sup> April Last Survey 6<sup>th</sup> August 1920

Reg. Book. 2173 on the S.S. Trawler "JOSEPH GORDON" (Number of Visits 3)

Master Built at Greenwich By whom built George Brown & Co. Ltd. Tons } Gross  
Net

Engines made at Glasgow By whom made Gaudie, Gillespie & Co. Ltd. When built 1918

Boilers made at By whom made A & W. Dalglisk & Co. when made 1918

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Exp<sup>ns</sup>, Surface Condensing No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 12 $\frac{1}{2}$ -21-35 Length of Stroke 26 Revs. per minute 110 Dia. of Screw shaft as per rule 7 $\frac{3}{4}$  as fitted 7 $\frac{1}{8}$  Material of 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 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

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 34"

Dia. of Tunnel shaft as per rule 7 $\frac{1}{8}$  as fitted 7 $\frac{1}{8}$  Dia. of Crank shaft journals as per rule 6 $\frac{9}{16}$  as fitted 7 $\frac{1}{8}$  Dia. of Crank pin 7 $\frac{1}{8}$  Size of Crank webs 4 $\frac{1}{2}$  Dia. of thrust shaft under

collars 7 $\frac{1}{8}$  Dia. of screw 9 $\frac{1}{2}$  Pitch of Screw 11 $\frac{1}{2}$  No. of Blades 4 State whether moveable No Total surface 35 $\frac{1}{2}$

No. of Feed pumps 2 Diameter of ditto 2 $\frac{1}{2}$  Stroke 12 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 $\frac{1}{2}$  Stroke 12 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 & 1 $\frac{1}{2}$  Sizes of Pumps 6 $\frac{1}{2}$  x 3 x 6 & 6 $\frac{1}{2}$  x 4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3-2 In Holds, &c. 1-2" for Fore Hold, 1-2" for Stowage well.

2" Bilge suction from stowage well.

No. of Bilge Injections 1 sizes 3 $\frac{1}{2}$  Connected to condenser, or to circulating pump C.P.M.P. Is a separate Donkey Suction fitted in Engine room & size yes, 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 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 Ford Suctions How are they protected Wood casings.

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 none Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record -S) Manufacturers of Steel

Total Heating Surface of Boilers 1619.4 Is Forced Draft fitted No No. and Description of Boilers One Single ended.

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 12-6-18 No. of Certificate BRITISH CORPORATION

Can each boiler be worked separately Area of fire grate in each boiler 55 $\frac{1}{2}$  No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 4.9 $\frac{1}{2}$  Pressure to which they are adjusted NOT ADJUSTED Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 8" Mean dia. of boilers 13 $\frac{1}{2}$ -7 $\frac{1}{2}$  Length 10 $\frac{1}{2}$ -6" Material of shell plates Steel

Thickness 1 $\frac{1}{8}$ " Range of tensile strength Are the shell plates welded or flanged Flanged Descrip. of riveting: cir. seams D.R. LAP.

long. seams T.R. BUTTS Diameter of rivet holes in long. seams 1 $\frac{1}{32}$  Pitch of rivets 8" Lap of plates or width of butt straps 17 $\frac{1}{2}$ "

Per centages of strength of longitudinal joint rivets 86.7 plate 85.5 Working pressure of shell by rules 184.4 Size of manhole in shell 16"x12"

Size of compensating ring 32"x128" No. and Description of Furnaces in each boiler 3 plain Material Steel INT. Outside diameter 3 $\frac{1}{4}$ "

Length of plain part top 6 $\frac{1}{2}$ " bottom 6 $\frac{1}{2}$ " Thickness of plates crown 1 $\frac{1}{16}$  bottom 1 $\frac{1}{16}$  Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules 200 Combustion chamber plates: Material Steel Thickness: Sides 1 $\frac{1}{16}$  Back 1 $\frac{1}{16}$  Top 1 $\frac{1}{16}$  Bottom 7 $\frac{1}{8}$ "

Pitch of stays to ditto: Sides 9 $\frac{1}{2}$ x9 $\frac{1}{2}$  Back 9 $\frac{1}{2}$ x8" Top 10x8 $\frac{1}{2}$  If stays are fitted with nuts or riveted heads none Working pressure by rules 180

Material of stays Steel Area at smallest part 1.91 $\frac{1}{2}$  Area supported by each stay 90.25 $\frac{1}{2}$  Working pressure by rules 190.4 End plates in steam space:

Material Steel Thickness 1 $\frac{1}{8}$ " Pitch of stays 16 $\frac{1}{2}$ x18" How are stays secured DOUBLE NUTS & WASHERS Working pressure by rules 197 Material of stays Steel

Area at smallest part 6.49 $\frac{1}{2}$  Area supported by each stay 303.75 $\frac{1}{2}$  Working pressure by rules 222 Material of Front-plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 14 $\frac{1}{2}$ x9 $\frac{1}{2}$  Working pressure of plate by rules 220

Diameter of tubes 3 $\frac{1}{2}$ " Pitch of tubes 4 $\frac{3}{4}$ " Material of tube plates Steel Thickness: Front 1" Back 7 $\frac{1}{8}$ " Mean pitch of stays 9 $\frac{1}{2}$ "

Pitch across wide water spaces 14" Working pressures by rules 182.8 Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 $\frac{1}{2}$ x1 $\frac{1}{4}$  Length as per rule 33" Distance apart 8 $\frac{1}{2}$ " Number and pitch of stays in each 2-10"

Working pressure by rules 208.7 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



IS A DONKEY BOILER FITTED? **No**

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— 2 Top-end bolts & nuts, 2 Bottom-end bolts & nuts, 2 Main bearing bolts & nuts, 1 set of Coupling bolts & nuts, 1 spare set of valves for each pump, 1 set of springs for piston rod packing, 1 Safety Valve spring, 1 Donkey check valve, 1 Main check valve, 6 gunnery studs & nuts, 3 Condenser tubes, 20 Condenser gaskets, 3 escape valve springs, 1 complete set of fire bars, 3 Boiler tubes.

(The above articles of spare gear are stored at Portsmouth Dockyard, and will be placed on board, before the vessel is handed over.)

The foregoing is a correct description,

Manufacturer.

Dates { During progress of work in shops - - }  
of Survey { During **SURVEY** on board vessel - - - }  
while building { Total No. of visits

14<sup>th</sup> April, 4<sup>th</sup> May, 6<sup>th</sup> August.

Is the approved plan of main boiler forwarded herewith **No**

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 14-4-20 Slides 14-4-20 Covers 14-4-20 Pistons 14-4-20 Rods 14-4-20  
Connecting rods 14-4-20 Crank shaft 14-4-20 Thrust shaft 14-4-20 Tunnel shafts ☒ Screw shaft 14-4-20 Propeller 14-4-20  
Stern tube 14-4-20 Steam pipes tested ☒ Engine and boiler seatings 14-4-20 Engines holding down bolts 14-4-20  
Completion of pumping arrangements ☒ Boilers fixed ☒ Engines tried under steam **NOT YET TRIED.**  
Completion of fitting sea connections ☒ Stern tube ☒ Screw shaft and propeller ☒  
Main boiler safety valves adjusted **NOT YET ADJUSTED** Thickness of adjusting washers ☒

Material of Crank shaft ☒ Identification Mark on Do. ☒ Material of Thrust shaft ☒ Identification Mark on Do. ☒

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts ☒ Identification Marks on Do. ☒

Material of Steam Pipes **Copper** Test pressure ☒

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 ☒ If so, state name of vessel ☒

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

The Machinery and Boilers have been built under British Corporation survey, to plans & specification jointly approved by Lloyds Register & British Corporation. The materials & workmanship appear to be sound and good. The machinery will be eligible in my opinion to have notation L.M.C. 8.20, and date of examination of Tail Shaft 4.20, when the Safety Valves have been adjusted under steam, and a trial under working conditions carried out.

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

The amount of Entry Fee ... £  
Special ... £  
Donkey Boiler Fee ... £  
Travelling Expenses (if any) £

When applied for,

When received,

Committee's Minute

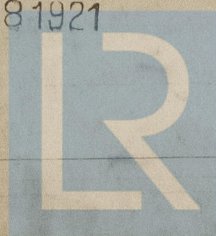
Assigned

WED 29 DEC 1920

TUE NOV. 28 1921

C. H. Boyle  
Engineer Surveyor to Lloyd's Register of Shipping.

CERTIFICATE WRITTEN



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Foundation