

REPORT ON MACHINERY.

No. 2962
SAT. NOV. 20 1920

Received at London Office

4. of writing Report 16 Nov 1920 When handed in at Local Office 19 Port of *Meyer*
in Survey held at *Pembroke Dockyard* Date, First Survey 2nd Sept Last Survey 30 Oct 1920
Book. on the *Sst Trawler "George Darby"* (Number of Visits) Tons { Gross
ter Built at *Paisley* By whom built *Bowthⁿ Lachlan & Co* When built 1918
ines made at *Liverpool* By whom made *Fawcett, Brassey & Co L^d* when made 1918
ers made at *Paisley* By whom made *Bowthⁿ Lachlan & Co L^d* when made 1918

Registered Horse Power Owners Port belonging to
Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted *Yes*

GINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders 3 No. of Cranks 3

of Cylinders 12 $\frac{1}{2}$ " x 21" x 35 Length of Stroke 26 Revs. per minute 110 Dia. of Screw shaft as per rule 7.56 Material of *Iron*
as fitted 7.78 screw shaft

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 34"

of Tunnel shaft as per rule 6.57 Dia. of Crank shaft journals as per rule 6.9 Dia. of Crank pin 7 $\frac{1}{8}$ Size of Crank webs 13 $\frac{3}{4}$ x 4 $\frac{1}{2}$ Dia. of thrust shaft under

ars 7 $\frac{1}{8}$ Dia. of screw 9.6 Pitch of Screw 11-1 $\frac{1}{2}$ No. of Blades 4 State whether moveable *No* Total surface 35 $\frac{1}{2}$ Φ

of Feed pumps 2 Diameter of ditto 2 $\frac{1}{2}$ Stroke 12" Can one be overhauled while the other is at work *Yes*

of Bilge pumps 2 Diameter of ditto 2 $\frac{1}{2}$ Stroke 12" Can one be overhauled while the other is at work *Yes*

of Donkey Engines 2 & 3 $\frac{1}{2}$ HP Sizes of Pumps 6x3x6 & 6x4x6" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 12" from aft 1 from forward & 2" *Exhaust* Holds, &c. *on from Forward & 12" from stokehold*

also *separate 2" ejector from air tank*

of Bilge Injections 1 sizes 3 $\frac{1}{2}$ Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size *Yes 4" or 6"*

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*

all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Both*

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*

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*

that pipes are carried through the bunkers *Forward Suctions* How are they protected *Wood casing*

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *Yes*

the Screw Shaft Tunnel watertight ☒ Is it fitted with a watertight door ☒ worked from ☒

ILERS, &c.—(Letter for record *S*) Manufacturers of Steel

total Heating Surface of Boilers 1619 Is Forced Draft fitted *No* No. and Description of Boilers *Single ended*

orking Pressure 180 lb Tested by hydraulic pressure to Date of test No. of Certificate

in each boiler be worked separately ☒ Area of fire grate in each boiler 50 $\frac{1}{2}$ Φ No. and Description of Safety Valves to

h boiler 2 direct spring Area of each valve 4.9 Pressure to which they are adjusted 182 Are they fitted with easing gear *Yes*

allest distance between boilers or uptakes and bunkers or woodwork 8' *8m* dia. of boilers 162" Length 10 $\frac{1}{16}$ Material of shell plates *S*

ickness 1 $\frac{3}{32}$ Range of tensile strength 28 - 32 Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *double*

g. seams *TREAS* Diameter of rivet holes in long. seams 9.5/32 Pitch of rivets 8" Lap of plates or width of butt straps 17"

er centages of strength of longitudinal joint rivets 89.3 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

ze of compensating ring 9 1 $\frac{3}{32}$ No. and Description of Furnaces in each boiler 3 plain Material *S* Outside diameter 40 $\frac{9}{16}$

ength of plain part top 81 $\frac{1}{2}$ Thickness of plates crown 25 Description of longitudinal joint *Welded* No. of strengthening rings ☒

orking pressure of furnace by the rules 188 Combustion chamber plates: Material *S* Thickness: Sides 1 $\frac{1}{16}$ " Back 2 $\frac{1}{32}$ " Top 1 $\frac{1}{16}$ " Bottom 7 $\frac{1}{8}$ "

itch of stays to ditto: Sides 9 $\frac{1}{2}$ x 9 $\frac{1}{8}$ Back 9 x 9" Top 9 $\frac{1}{2}$ x 9 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules 181

aterial of stays *S* Area at smallest part 2.07 Area supported by each stay 90.21 Working pressure by rules 206 End plates in steam space:

aterial *S* Thickness 1 $\frac{1}{16}$ " Pitch of stays 17 x 17 How are stays secured *Nuts & washers* Working pressure by rules 181 Material of stays *S*

rea at smallest part 6.10 Area supported by each stay 295 Working pressure by rules 215 Material of Front plates at bottom *S*

ickness 3 $\frac{1}{32}$ Material of Lower back plate *S* Thickness 1 $\frac{1}{16}$ " Greatest pitch of stays 14' 9" Working pressure of plate by rules 219

iameter of tubes 3 $\frac{1}{2}$ " Pitch of tubes 5 $\frac{1}{2}$ x 4 $\frac{3}{4}$ Material of tube plates *S* Thickness: Front 3 $\frac{1}{32}$ Back 2 $\frac{1}{8}$ " Mean pitch of stays 10"

itch across wide water spaces 14" Working pressures by rules 184 Girders to Chamber tops: Material *S* Depth and

ickness of girder at centre 8 $\frac{1}{2}$ x 1 $\frac{3}{4}$ Length as per rule 32" Distance apart 9 $\frac{1}{2}$ " Number and pitch of stays in each *760 9 $\frac{1}{2}$ "*

Working pressure by rules 197 Steam dome: description of joint to shell *none* % of strength of joint ☒

iameter ☒ Thickness of shell plates ☒ Material ☒ Description of longitudinal joint ☒ Diam. of rivet holes

itch of rivets ☒ Working pressure of shell by rules ☒ Crown plates Thickness How stayed

UPERHEATER. Type ☒ Date of Approval of Plan ☒ Tested by Hydraulic Pressure to ☒

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

iameter of Safety Valve ☒ Pressure to which each is adjusted ☒ Is Easing Gear fitted ☒

008541 - 008549 - 0091

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IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 top end bolts and nuts 2 bottom end bolts and nuts 2 main bearing bolts and nuts Set coupling bolts and nuts 1 Set of Air, feed and bilge valves Complete 6 junction studs 1 Safety valve spring a couple Set of valves for Auxiliary pumps 3 boiler tubes, 2 stoppers 3 Condenser tubes, and assorted bolts, & washers

The foregoing is a correct description,

Manufacturer.

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

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	Propeller
Completion of pumping arrangements	Boilers fixed	Engines tried under steam		
Completion of fitting sea connections	Stern tube	Screw shaft and propeller		
Main boiler safety valves adjusted	181 lbs	Thickness of adjusting washers	P 5/16 S 1/4	
Material of Crank shaft	Iron Identification Mark on Do.	Material of Thrust shaft	Iron Identification Mark on Do.	
Material of Tunnel shafts	Iron Identification Marks on Do.	Material of Screw shafts	Iron Identification Marks on Do.	
Material of Steam Pipes	S D Steel	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	yes			
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 workmanship of this vessel's machinery appears good, and was built under British Corporation Survey to plans, and specifications mutually agreed by this Society, and the B.C. In my opinion is eligible to have assigned L.M.C 10.

Certificate (if required) to be sent to

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £	:	:	19.
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) ... £	:	:	19.

Committee's Minute

Assigned

TUE. NOV. 30 1920

Lmb 1020

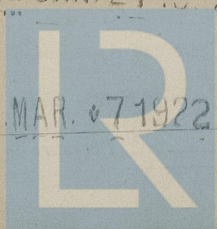
CERTIFICATE WRITTEN

St Johnstone

Engineer Surveyor to Lloyd's Register of Shipping

TUE. JAN. 24 1921

TUE. MAR. 7 1922



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