

# REPORT ON MACHINERY.

No. 10750

Writing Report 8<sup>th</sup> Sept. 1920 When handed in at Local Office 19 Port of Southampton  
 in Survey held at Combs. Isle of Wight Date, First Survey 28<sup>th</sup> May. Last Survey 31<sup>st</sup> August 1920  
 on the STM. TRAWLER "GEORGE CLARKE" (Number of Visits 5)

ter Built at South Shields By whom built J. P. Remoldson & Sons Ltd  
 ines made at South Shields By whom made J. P. Remoldson & Sons Ltd when made 1917  
 ers made at Sunderland By whom made North Eastern Marine Engin<sup>g</sup> Co Ltd when made 1916  
 istered Horse Power Owners Port belonging to

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

INES, &c.—Description of Engines Triple Expansion, Surface Condensing No. of Cylinders 3 No. of Cranks 3  
 of Cylinders 12 $\frac{1}{2}$ " - 21" - 35" Length of Stroke 26" Revs. per minute 110 Dia. of Screw shaft as per rule 7 $\frac{3}{4}$ " Material of screw shaft as fitted 7 $\frac{3}{8}$ "  
 e 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  
 e 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  
 en the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two  
 s are fitted, is the shaft lapped or protected between the liners Length of stern bush 34"

of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule 6 $\frac{9}{16}$ " Dia. of Crank pin 7 $\frac{3}{8}$ " Size of Crank webs 4 $\frac{1}{2}$ " Dia. of thrust shaft under  
 rs 7 $\frac{3}{8}$ " 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 $\frac{1}{2}$   
 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 & 1 $\frac{1}{2}$  hp Sizes of Pumps 6"x3"x6" & 6"x4"x6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room 3-2" In Holds, &c. 1-2" for Fore Hold, 1-2" for Stash Well

" 1 $\frac{1}{2}$  hp suction from slush well  
 Bilge Injections 1 sizes 3 $\frac{1}{2}$ " Connected to condenser, or to circulating pump C. Pump Is a separate Donkey Suction fitted in Engine room & size yes 2"

ll 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  
 ll connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

hey 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  
 hey 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

pipes are carried through the bunkers Fore suction How are they protected Wood casings  
 ll 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  
 Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

ERS, &c.—(Letter for record S ) Manufacturers of Steel J. Spencer & Sons Ltd

Heating Surface of Boilers 1665 Is Forced Draft fitted No No. and Description of Boilers One Single Ended.  
 ing Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 11-12-16 No. of Certificate 3376

ch boiler be worked separately Area of fire grate in each boiler 38 $\frac{1}{2}$  ft<sup>2</sup> No. and Description of Safety Valves to  
 iler 2 Spring Loaded Area of each valve 4.9 ft<sup>2</sup> Pressure to which they are adjusted 183 lbs. Are they fitted with easing gear yes

at distance between boilers or uptakes and bunkers or woodwork 6" Mean dia. of boilers 13 $\frac{1}{2}$ " Length 10 $\frac{1}{2}$ " Material of shell plates steel  
 ss 1" Range of tensile strength 29 $\frac{7}{8}$ -33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. LAP.

ams T.R. DOUBLE BUTT STRAP Diameter of rivet holes in long. seams 1 $\frac{1}{32}$ " Pitch of rivets 9 $\frac{7}{8}$ " Lap of plates or width of butt straps 19"  
 tages of strength of longitudinal joint rivets 87.86 Working pressure of shell by rules 180 lbs. Size of manhole in shell 16"x12"

compensating ring 7 flanged No. and Description of Furnaces in each boiler 2 Deighton Material steel Outside diameter 47 $\frac{1}{2}$ "  
 of plain part top Thickness of plates crown 9 $\frac{1}{16}$ " Description of longitudinal joint Welded No. of strengthening rings 1

g pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 3 $\frac{3}{4}$ " Back 2 $\frac{5}{8}$ " Top 3 $\frac{1}{4}$ " Bottom 1 $\frac{5}{16}$ "  
 stays to ditto: Sides 11 $\frac{7}{8}$ "x8 $\frac{1}{2}$ " Back 10 $\frac{5}{8}$ "x11" Top 11 $\frac{7}{8}$ "x8 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads No Working pressure by rules 180

l of stays steel Area at smallest part 2.79 ft<sup>2</sup> Area supported by each stay 137.5 ft<sup>2</sup> Working pressure by rules 182 End plates in steam space:  
 l steel Thickness 1 $\frac{9}{32}$ " Pitch of stays 23"x18 $\frac{1}{8}$ " How are stays secured DOUBLE NUTS WORKERS Working pressure by rules 181.2 Material of stays steel

l smallest part 7.36 ft<sup>2</sup> Area supported by each stay 416.8 ft<sup>2</sup> Working pressure by rules 183 Material of Front plates at bottom steel  
 s 3 $\frac{1}{4}$ " Material of Lower back plate steel Thickness 1 $\frac{5}{16}$ " Greatest pitch of stays 14 $\frac{7}{8}$ "x10 $\frac{5}{8}$ " Working pressure of plate by rules 181

of tubes 3 $\frac{1}{4}$ " Pitch of tubes 4 $\frac{3}{4}$ "x4 $\frac{1}{2}$ " Material of tube plates steel Thickness: Front 3 $\frac{3}{4}$ " Back 3 $\frac{1}{4}$ " Mean pitch of stays 10.56"  
 across wide water spaces 14 $\frac{1}{2}$ " Working pressures by rules 192.7 Girders to Chamber tops: Material steel Depth and

s of girder at centre 8x2 $\frac{1}{8}$ " Length as per rule 30 $\frac{1}{2}$ " Distance apart 11 $\frac{7}{8}$ " Number and pitch of stays in each 2-8 $\frac{1}{2}$ "  
 g pressure by rules 182 Steam dome: description of joint to shell % of strength of joint

Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
 rivets Working pressure of shell by rules Crown plates Thickness How stayed

HEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler  
 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 set of valves for each pump. 1 set of springs for piston rod packing. 1 Safety Valve spring. 1 Main Check valve. 1 Donkey check valve. 6 Gunthorpe studs and nuts. 20 Condenser ferrules. 3 Condenser tubes. 3 Escape valve spring. 1 complete set of fire-bars. 3 Boiler tubes. 24 Bolts & nuts assorted. 1 cut. of iron assorted.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 28<sup>th</sup> May, 11<sup>th</sup> & 24<sup>th</sup> June, 19<sup>th</sup> & 31<sup>st</sup> August.  
During <sup>SURVEY</sup> erection on board vessel -- 5  
Total No. of visits

Is the approved plan of main boiler forwarded herewith No

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 28-5-20 Slides 28-5-20 Covers 28-5-20 Pistons 28-5-20 Rods 28-5-20

Connecting rods 28-5-20 Crank shaft 28-5-20 Thrust shaft 28-5-20 Tunnel shafts L Screw shaft 19-8-20 Propeller 19-8-20

Stern tube L Steam pipes tested L Engine and boiler seatings 28-5-20 Engines holding down bolts 28-5-20

Completion of pumping arrangements — Boilers fixed L Engines tried under steam 31-8-20

Completion of fitting sea connections L Stern tube L Screw shaft and propeller L

Main boiler safety valves adjusted 31-8-20 Thickness of adjusting washers P:- 17/64" S. 11/32"

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

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

Material of Steam Pipes Copper Test pressure 360

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. L

Have the requirements of Section 49 of the Rules been complied with. —

Is this machinery duplicate of a previous case L If so, state name of vessel. —

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

The Machinery was built under British Corporation Survey to plans and specifications jointly approved by Lloyd's Register and British Corporation.

The Boiler was built under Special Survey by the Surveyors to Lloyd's Register.

The Materials and workmanship appear to be sound and good.

The Machinery has been tried under steam and found satisfactory, the same being eligible in my opinion to have notation L.M.C. 8.20 and date of examination of Tail Shaft 8.20.

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

When applied for,

When received,

Committee's Minute

Assigned

FRI. NOV. 19 1920

L.M.C. 8.20

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



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CERTIFICATE WRITTEN