

REPORT ON MACHINERY.

No. 29903

Date of writing Report 30-3-17 18 When handed in at Local Office 4-4-17 18 Port of Hull Received at London Office SAT. 14 APR. 1917

No. in Survey held at Hull Date, First Survey 25-5-16 Last Survey 28-3-17 19
 Reg. Book. 143 on the steel screw trawler "Gambri"
 Master Built at Beverley By whom built Cook Wilton & Gammell Tons Gross 274 Net 123
 Engines made at Hull By whom made C. D. Holmes & Co. Ltd. when made 1917-3
 Boilers made at Hull By whom made C. D. Holmes & Co. Ltd. when made 1917-3
 Registered Horse Power Owners A. Grant Port belonging to Grimsby
 Nom. Horse Power as per Section 28 79 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 12 3/4" - 22" - 36" Length of Stroke 24" Revs. per minute 107 Dia. of Screw shaft as per rule 7 1/2" Material of screw shaft as fitted 7 1/2" Material of screw shaft as fitted 7 1/2"
 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
 Is the propeller boss yes If the liner is in more than one length are the joints burned yes 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 35 1/2"
 Dia. of Tunnel shaft as per rule 6 5/8" Dia. of Crank shaft journals as per rule 6 5/8" Dia. of Crank pin 7 1/2" Size of Crank webs 4 1/2" x 13 1/2" Dia. of thrust shaft under collars 7 1/8" Dia. of screw 9-3" Pitch of Screw 10'-8" No. of Blades 4 State whether moveable no Total surface 30 1/4"
 No. of Feed pumps one Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work
 No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 24" Can one be overhauled while the other is at work
 No. of Donkey Engines one 2 1/2" Sizes of Pumps 5, 2 3/4" x 5" Fly wheel No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" diam In Holds, &c. one 2" diam in each compartment
 all suction, also connected to 2 1/2" ejector
 No. of Bilge Injections one sizes 3" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2 1/2" ejector
 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 Forward suction How are they protected strong wooden casing
 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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Stewarts & Lloyds
 Total Heating Surface of Boilers 1355 1/2 Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 21-12-16 No. of Certificate 3182
 Can each boiler be worked separately Area of fire grate in each boiler 45.7 sq ft No. and Description of Safety Valves to each boiler two spring loaded Area of each valve 4.9 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers on uptakes and bunkers on woodwork 6" lagged 12" dia. of boilers 159 3/16" Length 10'-6" Material of shell plates steel
 Thickness 3/32" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams J.R.B. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 6 7/8" Lap of plates or width of butt straps 15 3/4"
 Per centages of strength of longitudinal joint rivets 87.5 plate 64.5 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"
 Size of compensating ring 7' x 1 3/32" No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 38"
 Length of plain part top 79 1/2" bottom 74" Thickness of plates crown 7 1/4" Description of longitudinal joint welded No. of strengthening rings 23 3/32" 23 3/32" 23 3/32" 23 3/32"
 Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top 3/4" Bottom 23/32"
 Pitch of stays to ditto: Sides 11" x 8 1/2" Back 11" x 8 1/2" Top 11" x 9 1/4" If stays are fitted with nuts or riveted heads none Working pressure by rules 185
 Material of stays steel Area at smallest part 2.4 sq in Area supported by each stay 116 Working pressure by rules 186 End plates in steam space:
 Material steel Thickness 1 1/16" Pitch of stays 18" x 16" How are stays secured 8 7/8" Working pressure by rules 185 Material of stays steel
 Area at smallest part 5.27 sq in Area supported by each stay 288 sq in Working pressure by rules 190 Material of Front plates at bottom steel
 Thickness 7/8" Material of Lower back plate steel Thickness 27/32" Greatest pitch of stays 14" x 8 1/2" Working pressure of plate by rules 184
 Diameter of tubes 3 1/2" Pitch of tubes 5" Material of tube plates steel Thickness: Front 7/8" + 3/4" Back 7/8" Mean pitch of stays 11 1/4"
 Pitch across wide water spaces 14" Working pressures by rules 216 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 9" x 1 3/4" Length as per rule 34.93 Distance apart 9" Number and pitch of stays in each Two 11"
 Working pressure by rules 202 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:— *Two top end bolts & nuts, Two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each of air, circulating, feed & bilge pump valves, one set of donkey pump valves, 6 junk ring studs & nuts, one main & one donkey check valve, two safety valve springs & a quantity of bolts & nuts & iron of various sizes.*

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & Co. LTD.

Arthur Holmes

DIRECTOR.

Manufacturer.

Dates of Survey while building: During progress of work in shops: *1916: May 25 Jun 9. 22. Jul 10. 14. 17. 21. 26. 28 Aug 15. 28. 29 Sep 1. 2. 5. 7. 12. 13. 14. 15*
During erection on board vessel: *19. 21 Oct 5. 10. 12. 17. 19. 20. 25. 27. 31 Nov 3. 7. 9. 10. 15. 18. 21. 24. 28 Dec 1. 5. 9. 14. 19. 21 1917: Jan 16*
Total No. of visits: *20*
Is the approved plan of main boiler forwarded herewith? *yes*

Dates of Examination of principal parts—Cylinders *31-10-16* Slides *23-1-17* Covers *25-10-16* Pistons *27-10-16* Rods *30-1-17*
Connecting rods *25-1-17* Crank shaft *8-11-16* Thrust shaft *19-2-17* Tunnel shafts *✓* Screw shaft *14-9-16* Propeller *14-9-16*
Stern tube *12-9-16* Steam pipes tested *23-3-17* Engine and boiler seatings *15-9-16* Engines holding down bolts *7-1-17*
Completion of pumping arrangements: *27-3-17* Boilers fixed *7-1-17* Engines tried under steam *27-3-17*
Completion of fitting sea connections *15-9-16* Stern tube *15-9-16* Screw shaft and propeller *15-9-16*
Main boiler safety valves adjusted *27-3-17* Thickness of adjusting washers *F 3/8 A 7/16*
Material of Crank shaft *Iron* Identification Mark on Do. *1753 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *1737 FLS*
Material of Tunnel shafts *✓* Identification Marks on Do. *✓* Material of Screw shafts *Iron* Identification Marks on Do. *1712 FLS*
Material of Steam Pipes *Solid drawn copper* Test pressure *400*
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? *yes* If so, state name of vessel *Rugby.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society. The materials & workmanship are good, the boiler & steam pipes have been tested by hydraulic pressure as above & found sound & good. The machinery has been properly fitted & secured on board the vessel on completion tested under steam & found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 192 lbs.*

In my opinion the vessel is eligible for the record + L.H.C. 3.17

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.17.

The amount of Entry Fee £ 1 : 0 :
Special ... *no* £ 11 : 17 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 2/-

When applied for,

13.4.1917

When received,

30.6.1917

Frank L. Sturgeon

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE. 17 APR. 1917

+ LMC 3.17

MACHINERY CERTIFICATE
WRITTEN



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Foundation