

REPORT ON MACHINERY.

No. 30784
FRI.-8 NOV. 1918

Received at London Office

Date of writing Report 19 When handed in at Local Office 6/11/18 Port of Hull

No. in Survey held at Hull Date, First Survey 19.12.17 Last Survey 31-10-18 19
 Reg. Book. on the steel screw trawler "William Inwood" (Number of Vents 48)

Master Built at Leby By whom built Cochrane Bros Ltd Tons } Gross 324
 Engines made at Hull By whom made Chas. D. Holmes & Co Ltd (A27) when made 1918-10 Net 149
 Boilers made at Hull By whom made Chas. D. Holmes & Co Ltd (A42) when made 1918-10 When built 1918-10

Registered Horse Power Owners British Admiralty 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 expansion No. of Cylinders Three No. of Cranks 3

Dia. of Cylinders 13-23-37" Length of Stroke 26 Revs. per minute 116 Dia. of Screw shaft as per rule 7.9 Material of screw shaft Steel
 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 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 7.04 Dia. of Crank shaft journals as per rule 7.39 Dia. of Crank pin 7 1/2" Size of Crank webs 4 1/2" x 11" Dia. of thrust shaft under
 collars 7 1/2" Dia. of screw 9-7 1/2" Pitch of Screw 11-0" No. of Blades 4 State whether moveable no Total surface 33 sq ft

No. of Feed pumps one Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps one Diameter of ditto 2 5/8" Stroke 14 3/4" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines one 43" geyser Sizes of Pumps 6", 4 1/2" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 12" dia In Holds, &c. one 2" dia in each compartment
all suction also connected to geyser

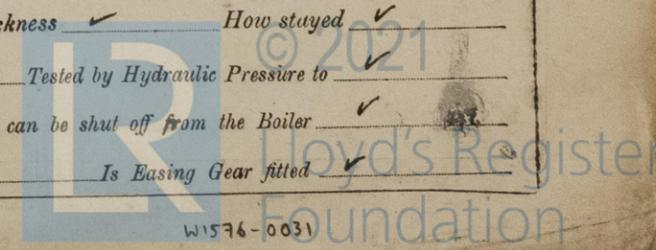
No. of Bilge Injections one sizes 3 1/2" Connected to condensers or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 3" geyser
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads 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 & water stem How are they protected strong 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

OILERS, &c.—(Letter for record 8) Manufacturers of Steel J. Spencer & Co & Port-Lubric

Total Heating Surface of Boilers 1440 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 9-9-18 No. of Certificate 3316

Can each boiler be worked separately ✓ Area of fire grate in each boiler 48 sq ft No. and Description of Safety Valves to
 each boiler Two spring loaded Area of each valve 4.9 sq" Pressure to which they are adjusted 205 Are they fitted with casing gear yes
 smallest distance between boilers or uptakes and bunkers or woodwork 9" lapped Mean dia. of boilers 165" Length 10'-8" Material of shell plates steel
 Thickness 1 1/8" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 ing. seams V.P.D.B. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18"
 Percentages of strength of longitudinal joint rivets 85.9 Working pressure of shell by rules 202 Size of manhole in shell 16" x 12"
 plate 85.5
 size of compensating ring 7" x 1 1/8" No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 40"
 length of plain part top 7 1/2" Thickness of plates bottom 1 1/8" crown 3 13/16" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 206 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 2 3/32" Top 3/4" Bottom 3/4"
 pitch of stays to ditto: Sides 10" x 8" Back 9 1/2" x 8 1/2" Top 11" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 208
 Water Capa
 Tons material of stays steel Area at smallest part 2.07 sq" Area supported by each stay 88 sq" Working pressure by rules 211 End plates in steam space:
 material steel Thickness 1 3/32" Pitch of stays 9" x 17 1/8" How are stays secured 2 turn Working pressure by rules 210 Material of stays steel
 area at smallest part 7.5 sq" Area supported by each stay 335 sq" Working pressure by rules 233 Material of Front plates at bottom steel
 thickness 1 5/16" Material of Lower back plate steel Thickness 1 5/16" Greatest pitch of stays 3 3/4" x 9 1/2" Working pressure of plate by rules 216
 diameter of tubes 3 1/2" Pitch of tubes 4 7/8" Material of tube plates steel Thickness: Front 1 5/16" + 3/8" Back 7/8" Mean pitch of stays 10"
 pitch across wide water spaces 14" Working pressures by rules 275 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 11" x 1 3/4" Length as per rule 36 218 Distance apart 11" Number and pitch of stays in each Three 8"
 Working pressure by rules 201 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 ✓
 of 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:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts, one set of coupling bolts & nuts, one set of air, feed & bilge pump valves, six junk ring studs & nuts, one main & one donkey chest valve two valves for donkey pump, one safety valve spring, 3 condenser tubes, one set of fire bar, & a quantity of bolts & nuts size of various sizes.*

The foregoing is a correct description,

S. Arthur Holmes Manufacturer.

Dates of Survey while building: { During progress of work in shops -- 1917: Dec 19. 1918: May 6, Jun 4, 7, 10, 13, 19, 21, 27, 28 Jul 2, 3, 4, 10, 12, 14, 18, 25, 26, 27
During erection on board vessel --- Aug 1, 12, 13, 14, 15, 19, 21, 22, 26, 30 Sep 3, 7, 9, 12, 14, 18, 22, 26, 29 Oct 1, 8, 12, 14, 18, 22, 23
Total No. of visits *48*

Is the approved plan of main boiler forwarded herewith *dup already forwarded.*

Dates of Examination of principal parts—Cylinders *4-7-18* Slides *21-8-18* Covers *18-7-18* Pistons *13-8-18* Rods *13-8-18*
Connecting rods *13-8-18* Crank shaft *27-7-18* Thrust shaft *14-8-18* Tunnel shafts Screw shaft *28-6-18* Propeller *28-6-18*
Stern tube *28-6-18* Steam pipes tested *14-10-18* Engine and boiler seatings *3-7-18* Engines holding down bolts *8-10-18*
Completion of pumping arrangements *25-10-18* Boilers fixed *18-10-18* Engines tried under steam *25-10-18*
Completion of fitting sea connections *3-7-18* Stern tube *3-7-18* Screw shaft and propeller *3-7-18*
Main boiler safety valves adjusted *23-10-18* Thickness of adjusting washers *7 3/8 A 3/8*

Material of Crank shaft *steel* Identification Mark on Do. *1904 JR* Material of Thrust shaft *steel* Identification Mark on Do. *2147 FLS*
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts *steel* Identification Marks on Do. *2139 FLS*
Material of Steam Pipes *solid drawn copper* Test pressure *400 lbs.*

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 *Thames Blass.*

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 specification & the rules of this Society, the materials & workmanship are good, the boiler & steam pipes have been tested as above found sound & good. The machinery has been properly fitted & secured on board the vessel & on completion tested under full power for two hours as required by the Admiralty found satisfactory. The safety valves have been adjusted under steam & tested for accumulation which did not exceed 218 lbs. In my opinion the vessel is eligible for the Record + L.R.C. 10-18*

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.18

Frank L. Sturgeon *ARRK*

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 26 : 2 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 7/11 1918
When received, 29/11 1918

Frank L. Sturgeon
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE NOV 12 1918

Assigned

L.M.C. 10.18

MACHINERY CERTIFICATE WRITTEN



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