

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
Reg. Book.

Hull

Date, First Survey 19.12.17. Last Survey 31-10-18 19

(Number of Voids 48

Gross 324

Net 149

When built 1918-10

Master

Built at

Lelby

By whom built

Cochrane & Sons Ltd

Engines made at

Hull

By whom made

Chas. D. Holmes & Co. Ltd (A27) when made 1918-10

Boilers made at

Hull

By whom made

Chas. D. Holmes & Co. Ltd (A42) when made 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 as fitted 8.2" 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" g.p.s. 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 g.p.s.

No. of Bilge Injections one sizes 3 1/2" Connected to condenser or circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 3" g.p.s.

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 steam 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 & Sons & 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" Pressure to which they are adjusted 205 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Plated Mean dia. of boilers 165" Length 10'-8" Material of shell plates steel

Thickness 1 1/8" Range of tensile strength 28-32500 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"

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 crown 2 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

Material of stays steel Area at smallest part 2'07" Area supported by each stay 88" 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" Area supported by each stay 335" 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 1/8" Material of tube plates steel Thickness: Front 1 5/16" x 3 3/4" 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 2/8" 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 ✓

Pitch 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 pump 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 & nuts of various sizes.

The foregoing is a correct description,

CHARLES D. HOLMES & Co., Ltd.
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.*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 4-7-18 Slides 21-8-7-18 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 record is due to the for THE RECORD. + L.M.C. 10.18

11-11-18

ARSK

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

Frank L. Sturgeon

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE NOV 12 1918

L.M.C. 10.18

MACHINERY CERTIFICATE WRITTEN



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