

REPORT ON MACHINERY.

No. 30,260
MON. NOV. 26 1917.

Received at London Office

Date of writing Report 14-11-17 19 When handed in at Local Office 17-11-17 19 Port of Hull
No. in Survey held at Hull Date, First Survey 2-4-17 Last Survey 17-11-17 19
Reg. Book. on the steel screw tug Robert Barton (Number of Visits 35)
Master Built at Telby By whom built Cochrane & Sons Ltd Tons Gross 324 Net 133
Engines made at Hull By whom made Chas. J. Holmes & Co Ltd (A1) when made 1917-11
Boilers made at Hull By whom made Chas. J. Holmes & Co Ltd (A13) when made 1917-11
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 Dia. of Screw shaft as per rule 7.9" Material of screw shaft Iron
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 Yes 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 ft²
No. of Feed pumps one Diameter of ditto 2 3/4" Stroke 14 3/4" Can one be overhauled while the other is at work Yes
No. of Bilge pumps one Diameter of ditto 2 3/4" Stroke 14 3/4" Can one be overhauled while the other is at work Yes
No. of Donkey Engines one 9 3/4" 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 2" dia In Holds, &c. one 2" dia in each compartment

No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 3" yield
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 No
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 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
Dates of examination of completion of fitting of Sea Connections 31-7-17 of Stern Tube 31-7-17 Screw shaft and Propeller 31-7-17
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons
Total Heating Surface of Boilers 1440 ft² 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 25-10-17 No. of Certificate 324R
Can each boiler be worked separately Yes Area of fire grate in each boiler 48 2/3 ft² No. and Description of Safety Valves to
each boiler two spring loaded Area of each valve 4.9 ft² Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 8" Pl. lagged 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
long. seams J.R.D.B.1 Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 18"
Per centages of strength of longitudinal joint rivets 85.9- plate 85.3- 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 78 1/2" bottom 69" Thickness of plates crown 1 1/2" bottom 1 1/8" 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 Diameter at smallest part 2.07" Area supported by each stay 88 ft² Working pressure by rules 211 End plates in steam space
Material steel Thickness 1 7/32" Pitch of stays 9" x 17 7/8" How are stays secured 8 1/4" Working pressure by rules 210 Material of stays steel
Diameter at smallest part 7.5" Area supported by each stay 335 ft² 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 13 1/2" x 9 7/8" 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" + 3/4" 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 36.218 Distance apart 11" Number and pitch of stays in each three 8"
Working pressure by rules 201 Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked
separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet
holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes
Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

IS A DONKEY BOILER FITTED?

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 of air feed & life pump valves, one main & one donkey chest valve, two valves for donkey pump, 6 junk ring studs & nuts, one safety valve spring, 3 condenser tubes, one set of fire bars & a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,

CHARLES D. HOLMES & CO. LTD.

Charles D. Holmes

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

1917: Apr 2. 11. June 1. July 20. 24. Aug 1. 2. 29. Sep. 4. 6. 10. 11. 12. 19. 21. 26. 28. Oct 2. 3. 7. 8. 9
10. 12. 16. 19. 24. 25. Nov 1. 2. 7. 8. 10. 15. 17

Is the approved plan of main boiler forwarded herewith *duplicate already furnished*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 29-8-17 Slides 19-9-17 Covers 26-9-17 Pistons 19-9-17 Rods 21-9-17

Connecting rods 11-9-17 Crank shaft 19-9-17 Thrust shaft 28-9-17 Tunnel shafts ✓ Screw shaft 24-7-17 Propeller 24-7-17

Stern tube 24-7-17 Steam pipes tested 7-11-17 Engine and boiler seatings 31-7-17 Engines holding down bolts 2-11-17

Completion of pumping arrangements 10-11-17 Boilers fixed 8-11-17 Engines tried under steam 10-11-17

Main boiler safety valves adjusted 8-11-17 Thickness of adjusting washers 7 3/4 A 3/4

Material of Crank shaft *Iron* Identification Mark on Do. 2026 FLS Material of Thrust shaft *Iron* Identification Mark on Do. 2031 FLS

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. 1771 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 *Lord Thrusley class*

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 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 2 1/2 lbs.

In my opinion the vessel is eligible for the record + L.M.C. 11-17

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11-17.

The amount of Entry Fee ... £ :
Special ... £ 27 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ 12/3 :

When applied for, 24/11/17
When received, 30-11-1917

Frank A. Stanger
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

TUE NOV. 27 1917.

Assigned

+ L.M.C. 11-17

MACHINERY WRITTEN



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