

# REPORT ON MACHINERY

No. 30.480  
22 APR. 1918

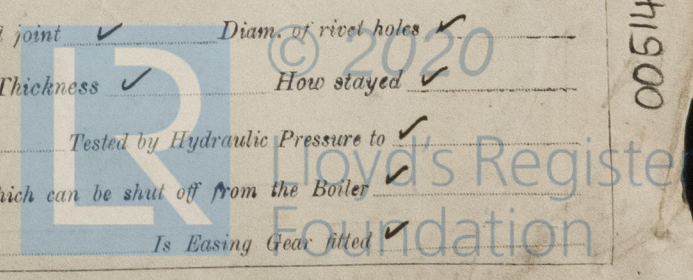
Received at London Office

Date of writing Report 16-4-18 19 When handed in at Local Office 19-4-18 19 Port of Hull  
No. in Survey held at Hull Date, First Survey 16-1-18 Last Survey 16-4-18 19  
Reg. Book. on the steel screw tug John Jacobs (Number of Visits 33)  
Master Built at Leby By whom built Cochrane Bros Ltd Tons Gross 325 Net 150  
Engines made at Hull By whom made Chas. & Holmes & Co Ltd (A19) when made 1918-4  
Boilers made at Hull By whom made Chas. & Holmes & Co Ltd (A33) when made 1918-4  
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 steel as fitted 8.2" screw shaft  
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 35.2"  
Dia. of Tunnel shaft as per rule 7.04" Dia. of Crank shaft journals as per rule 7.39" Dia. of Crank pin 7.2" Size of Crank webs 4.75"x11" Dia. of thrust shaft under  
collars 7.25" Dia. of screw 9'-7.25" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 38 sq ft  
No. of Feed pumps one Diameter of ditto 2.75" Stroke 14.75" Can one be overhauled while the other is at work  
No. of Bilge pumps one Diameter of ditto 2.75" Stroke 14.75" Can one be overhauled while the other is at work  
No. of Donkey Engines one & 3" ejector Sizes of Pumps 6", 4.25" 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  
all suction also connected to ejector  
No. of Bilge Injections one size 3.25" Connected to condenser, &c. to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 3" 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 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 Toward suction How are they protected along 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 Steel Co of Scotland & Duncan Sons Port of Leby  
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 28-3-18 No. of Certificate 3283  
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 in Pressure to which they are adjusted 205 Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers 8" lagged Mean dia. of boilers 16.5" Length 10'-8" Material of shell plates steel  
Thickness 1.5764 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. Diameter of rivet holes in long. seams 1.4" Pitch of rivets 8.5" Lap of plates or width of butt straps 18"  
Per centages of strength of longitudinal joint rivets 85.9 plate 85.6 Working pressure of shell by rules 202 Size of manhole in shell 16" x 12"  
Size of compensating ring 7" x 1.1664 No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 40"  
Length of plain part top 7.825" bottom 6.9" Thickness of plates crown 3.1316 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 9.25" x 8.25" 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 sq in Area supported by each stay 88 sq in Working pressure by rules 211 End plates in steam space:  
Material steel Thickness 1.732 Pitch of stays 19" x 17.8" How are stays secured 8.75" x 6" Working pressure by rules 210 Material of stays steel  
Area at smallest part 7.5 sq in Area supported by each stay 335 Working pressure by rules 233 Material of Front plates at bottom steel  
Thickness 1.5716 Material of Lower back plate steel Thickness 1.576 Greatest pitch of stays 13.25" x 9.25" Working pressure of plate by rules 216  
Diameter of tubes 3.25" Pitch of tubes 4.75" Material of tube plates steel Thickness: Front 1.5734 dbk Back 7/8" Mean pitch of stays 10"  
Pitch across wide water spaces 14" Working pressures by rules 276 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  
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

005141-005153-0134





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 of air, feed, & bilge pump valves, six gun ring studs & nuts, one main & one donkey check valve, two valves for donkey pump, 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 -- 1918: Jan 16, 21, 24, 25, 26, 30, Feb 4, 11, 12, 14, 15, 20, 31, 27 Mar 1, 6, 7, 8, 11, 13, 16, 20, 22, 25  
During erection on board vessel -- 26, 28 Apr 3, 5, 5, 9, 10, 11, 16  
Total No. of visits 33

Is the approved plan of main boiler forwarded herewith *disapproved*

" " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 11-2-18 Slides 11-2-18 Covers 21-2-18 Pistons 27-2-18 Rods 27-2-18  
Connecting rods 27-2-18 Crank shaft 1-3-18 Thrust shaft 11-3-18 Tunnel shafts ☒ Screw shaft 24-1-18 Propeller 24-1-18  
Stern tube 26-1-18 Steam pipes tested 8-4-18 Engine and boiler seatings 30-1-18 Engines holding down bolts 28-3-18  
Completion of pumping arrangements 11-4-18 Boilers fixed 9-4-18 Engines tried under steam 11-4-18  
Completion of fitting sea connections 30-1-18 Stern tube 30-1-18 Screw shaft and propeller 30-1-18  
Main boiler safety valves adjusted 10-4-18 Thickness of adjusting washers  $7\frac{1}{2}$  &  $2\frac{1}{16}$

Material of Crank shaft *Iron* Identification Mark on Do. 2101FLS Material of Thrust shaft *steel* Identification Mark on Do. 2102FLS

Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts *steel* Identification Marks on Do. 2085FLS

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 class*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has 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 & tight. The machinery has been properly fitted & secured on board the vessel & on completion tried 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 & d. M. C. 4-18*

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 4. 18.

*J.P.R.*  
*H.W.D.*  
22/4/18

The amount of Entry Fee ... £ 2 : 0 :  
Special ... £ 26 : 2 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 18/4/1918  
When received, 20/4/1918

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

Committee's Minute

Assigned

*+ d. M. C. 4:18*

TUE 23 APR. 1918

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation