

## REPORT ON MACHINERY

No. 30,386

Received at London Office MON. 18 FEB. 1913

Date of writing Report 8-2-18 19 When handed in at Local Office 16.2.17 Port of Hull  
No. in Survey held at Hull Date, First Survey 31-7-17 Last Survey 13-2-18 19  
Reg. Book. on the steel screw tug "Thomas Thresher" (Number of Visits 35)  
Master Built at Selby By whom built Cockburn & Sons Ltd  
Engines made at Hull By whom made Chas. D. Holmes & Co. Ltd (A11) when made 1918-2  
Boilers made at Hull By whom made Chas. D. Holmes & Co. Ltd (A24) when made 1918-2  
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 115 Dia. of Screw shaft as per rule 7.9" Material of screw shaft as fitted 8.4" Is the after end of the liner made water tight  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube 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 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 yes 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 movable no Total surface 33 sq ft  
No. of Feed pumps one Diameter of ditto 2 7/8" Stroke 14 3/4" Can one be overhauled while the other is at work yes  
No. of Bilge pumps one Diameter of ditto 2 7/8" Stroke 14 3/4" Can one be overhauled while the other is at work yes  
No. of Donkey Engines one 7.3" ejector 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" diam In Holds, &c. one 2" diam in each compartment  
all suction also connected to ejector  
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" 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 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 J. & W. Jones & Co. Ltd Port of Hull & 60 of Scotland  
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 25-1-18 No. of Certificate 3268  
Can each boiler be worked separately yes 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 ft Pressure to which they are adjusted 205 Are they fitted with easing gear yes  
Smallest distance between boilers on uptakes and bunkers or woodwork 8" Bl. lagging dia. of boilers 165" Length 10'-8" Material of shell plates steel  
Thickness 1 5/16" 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.A.B. 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 Working pressure of shell by rules 202 Size of manhole in shell 16" x 12"  
Size of compensating ring 7" x 1 5/16" 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 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 23/32" Top 3/4" Bottom 3/4"  
Pitch of stays to ditto: Sides 10" x 8" Back 9 3/4" x 6 3/4" 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 ft Area supported by each stay 88 sq ft Working pressure by rules 211 End plates in steam space  
Material steel Thickness 1 1/32" Pitch of stays 19' x 17 7/8" How are stays secured D.H. & W. Working pressure by rules 210 Material of stays steel  
Area at smallest part 7.5 sq ft Area supported by each stay 335 sq ft 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 3/4" x 9 9/16" 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 15 1/16" + 3/4" 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  
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 of air, feed & bilge pump valves, six junk 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 -- } *1917: July 31, Aug. 2, Oct. 29, Nov. 5, 7, 9, 13, 19, 23, 27, 30 Dec. 4, 8, 12, 17, 20, 28, 31*  
{ During erection on board vessel -- } *1918: Jan. 3, 7, 10, 14, 16, 19, 21, 22, 23, 25, 28, 30, 31, Feb. 2, 5, 11, 13*  
Total No. of visits *35*

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *4-12-17* Slides *17-12-17* Covers *31-12-17* Pistons *17-12-17* Rods *12-12-17*  
Connecting rods *17-12-17* Crank shaft *17-12-17* Thrust shaft *20-12-17* Tunnel shafts ☒ Screw shaft *7-11-17* Propeller *7-11-17*  
Stern tube *7-11-17* Steam pipes tested *30-1-18* Engine and boiler seatings *13-11-17* Engines holding down bolts *22-1-18*  
Completion of pumping arrangements *5-2-18* Boilers fixed *2-2-18* Engines tried under steam *5-2-18*  
Completion of fitting sea connections *13-11-17* Stern tube *13-11-17* Screw shaft and propeller *13-11-17*  
Main boiler safety valves adjusted *2-2-18* Thickness of adjusting washers *7 7/16" & 3/8"*

Material of Crank shaft *steel* Identification Mark on Do. *2068 FLS* Material of Thrust shaft *Iron* Identification Mark on Do. *2069 FLS*  
Material of Tunnel shafts ☒ Identification Marks on Do. ☒ Material of Screw shafts *Iron* Identification Marks on Do. *2044 FLS*  
Material of Steam Pipes *solid drawn copper* Test pressure *400 lbs*

Is an installation fitted for burning oil fuel ☒ 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 *Thursy Bliss*

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 & tight. 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 215 lbs. In my opinion the vessel is eligible for the record & L.M.C. 2-18*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 2-18.

*H.R.R.*

*J.W.D.*  
*18/2/18*

The amount of Entry Fee ... £ *2* : *0* :  
Special ... £ *26* : *2* :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ *✓* : :  
When applied for, *14/2/1918*  
When received, *23-2-1918*

*Frank L. Sturgeon*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE 19 FEB 1918

*+ L.M.C. 2-18*

ENTRY CERTIFICATE  
WRITTEN.



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Foundation