

# REPORT ON MACHINERY

No. 30473

18 APR. 1918

Received at London Office

Date of writing Report 19 When handed in at Local Office 17.4.18 Port of Hull

No. in Survey held at Hull Date, First Survey 13.9.17. Last Survey 11.4.1918  
 Reg. Book. on the Steam Trawler "Thomas Connolly." (Number of Visits 42)

Master Built at Beverley By whom built Cook, Welton & Lumell When built 1915.4  
 Engines made at Hull By whom made Amos & Smith L<sup>td</sup> No. 2933 when made 1918.4  
 Boilers made at Hull By whom made Amos & Smith L<sup>td</sup> No. 2933 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 3 ✓ No. of Cranks 3 ✓  
 Dia. of Cylinders 12 1/2" 21" 35" ✓ Length of Stroke 26" Revs. per minute 114 ✓ Dia. of Screw shaft as per rule 7.56" 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 ✓ 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 34" ✓  
 Dia. of Tunnel shaft as per rule 6.57" ✓ Dia. of Crank shaft journals as per rule 6.9" ✓ Dia. of Crank pin 7 1/8" ✓ Size of Crank webs 14" 4 1/2" ✓ Dia. of thrust shaft under collars 7 1/8" ✓ Dia. of screw 9" 6" ✓ Pitch of Screw 11" 1 1/2" ✓ No. of Blades 4 ✓ State whether moveable no ✓ Total surface 35 1/2" ✓  
 No. of Feed pumps 2 ✓ Diameter of ditto 2 1/2" ✓ Stroke 12" ✓ Can one be overhauled while the other is at work Yes ✓  
 No. of Bilge pumps 2 ✓ Diameter of ditto 2 1/2" ✓ Stroke 12" ✓ Can one be overhauled while the other is at work Yes ✓  
 No. of Donkey Engines 2 ✓ 3" ejector ✓ Sizes of Pumps 6" 3" 6" 4" 6" 4" 6" ✓ No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room One - 2" For. One - 2" aft & One - 2" Bilge aft. In Holds, &c. One - 2" from Fore hold, One - 2" from slush well, Also separate 2" ejector suction from slush well.  
 No. of Bilge Injections 1 sizes 3 1/2" ✓ Connected to condenser, or to circulating pump pump ✓ Is a separate Donkey Suction fitted in Engine room & size Yes ✓ 9" 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 Hood covering ✓  
 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 Messrs John Spencer & Sons L<sup>td</sup>

Total Heating Surface of Boilers 1590 ✓ Is Forced Draft fitted no ✓ No. and Description of Boilers One single ended ✓  
 Working Pressure 180 lbs. ✓ Tested by hydraulic pressure to 360 lbs. ✓ Date of test 8.2.18 ✓ No. of Certificate 3270 G.A. ✓  
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 48.75 ✓ No. and Description of Safety Valves to each boiler Two spring loaded ✓ Area of each valve 4.9 ✓ Pressure to which they are adjusted 185 lbs. ✓ Are they fitted with easing gear Yes ✓  
 Smallest distance between boilers or uptakes and bunkers or woodwork 8" ✓ Mean dia. of boilers 162" ✓ Length 10' 6 1/2" ✓ Material of shell plates S. ✓  
 Thickness 1 3/32" ✓ Range of tensile strength 28.32 ✓ Are the shell plates welded or flanged no ✓ Descrip. of riveting: cir. seams double ✓ long. seams S.P.D.S. ✓ Diameter of rivet holes in long. seams 1 3/32" ✓ Pitch of rivets 8" ✓ Lap of plates or width of butt straps 17" ✓  
 Per centages of strength of longitudinal joint rivets 89.3 ✓ Working pressure of shell by rules 180 lbs. ✓ Size of manhole in shell 16" 12" ✓ plate 85.5 ✓  
 Size of compensating ring 9" 1 3/32" ✓ No. and Description of Furnaces in each boiler 3 plain ✓ Material S. ✓ Outside diameter 40 9/16" ✓  
 Length of plain part top 81 1/2" ✓ Thickness of plates crown 25/32" ✓ Description of longitudinal joint Welded ✓ No. of strengthening rings ✓ bottom 76" ✓ bottom 25/32" ✓  
 Working pressure of furnace by the rules 188 ✓ Combustion chamber plates: Material S. ✓ Thickness: Sides 11/16" ✓ Back 21/32" ✓ Top 11/16" ✓ Bottom 7/8" ✓  
 Pitch of stays to ditto: Sides 9 1/2" 9 3/8" ✓ Back 9" 9" ✓ Top 9 1/2" 9 1/2" ✓ If stays are fitted with nuts or riveted heads Nuts ✓ Working pressure by rules 181 ✓  
 Material of stays S. ✓ Area at smallest part 2.07 ✓ Area supported by each stay 90.25 ✓ Working pressure by rules 206 ✓ End plates in steam space: Material S. ✓ Thickness 1 1/16" ✓ Pitch of stays 17 3/8" 17" ✓ How are stays secured S.P.D.S. ✓ Working pressure by rules 181 ✓ Material of stays S. ✓  
 Area at smallest part 6.10 ✓ Area supported by each stay 295 ✓ Working pressure by rules 215 ✓ Material of Front plates at bottom S. ✓  
 Thickness 31/32" ✓ Material of Lower back plate S. ✓ Thickness 15/16" ✓ Greatest pitch of stays 14" 9" ✓ Working pressure of plate by rules 219 ✓  
 Diameter of tubes 3 1/2" ✓ Pitch of tubes 5" 4 3/4" ✓ Material of tube plates S. ✓ Thickness: Front 31/32" ✓ Back 7/8" ✓ Mean pitch of stays 10" ✓  
 Pitch across wide water spaces 14" ✓ Working pressures by rules 184 ✓ Girders to Chamber tops: Material S. ✓ Depth and thickness of girder at centre 8 1/2" 1 3/4" ✓ Length as per rule 32" ✓ Distance apart 9 1/2" ✓ Number and pitch of stays in each Two - 9 1/2" ✓  
 Working pressure by rules 197 ✓ 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 ✓

orecastle 21

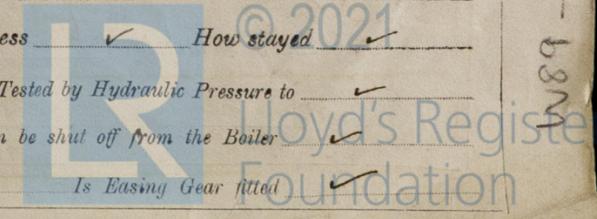
to be given as

Water Capacity Tons.

21.28 Dec.

Visits 36

0400-1821



IS A DONKEY BOILER FITTED?

No. ✓

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Four top end bolts and nuts, two bottom end bolts and nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts, one set of Air, feed and bilge pump valves, one set of piston studs and nuts. Four condenser tubes, three boiler tubes, one escape valve spring each size, two donkey pump suction and delivery valves, a quantity of assorted bolts and nuts and iron of various sizes.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

B. H. P. Linsun

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1917: - Sep 13, 29. Oct 5, 11, 12, 15, 22, 24, 30. Nov 7, 9, 17, 23, 27, 28, 29. Dec 3, 8, 10, 15, 24, 29. 1918: - Jan 2, 10, 11, 16, 21, 22 Feb 1, 7, 8, 15, 18, 21. Mar 7, 8, 18, 19, 23. Apr 3, 11. Total No. of visits 42

Is the approved plan of main boiler forwarded herewith *previously sent* ✓  
" " " donkey " " ✓

Dates of Examination of principal parts—Cylinders 24.12.17 Slides 29.11.17 Covers 29.11.17 Pistons 2.1.18 Rods 29.11.17  
Connecting rods 21.1.18 Crank shaft 7.2.18 Thrust shaft 7.1.18 Tunnel shafts ✓ Screw shaft 27.11.17 Propeller 27.11.17  
Stern tube 28.11.17 Steam pipes tested 7.3.18 Engine and boiler seatings Engines holding down bolts 7.3.18  
Completion of pumping arrangements 3.4.18 Boilers fixed 7.3.18 Engines tried under steam 29.3.18  
Completion of fitting sea connections 28.11.17 Stern tube 28.11.17 Screw shaft and propeller 28.11.17  
Main boiler safety valves adjusted 23.3.18 Thickness of adjusting washers P. 1/32 S. 13/32  
Material of Crank shaft Iron Identification Mark on Do. 1855 G.A. Material of Thrust shaft Iron Identification Mark on Do. 1848 G.A.  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 2061 F.L.S.  
Material of Steam Pipes S.D. Copper ✓ Test pressure 360 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 Yes. ✓  
Is this machinery duplicate of a previous case Yes. ✓ If so, state name of vessel "William Brown" (Castle 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 and the rules of this Society. The materials and workmanship are good, the boiler and steam pipes have been tested as above and found sound and good. The machinery has been properly fitted and secured on board the vessel and on completion was tested under full power for two hours as required by the Admiralty and found satisfactory. The safety valves have been adjusted under steam and tested for accumulation which did not exceed 190 lbs.

In my opinion the vessel is eligible for the record \* L.M.C. 4.18.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 4.18.

J.W.D. 18/4/18. J.P.R.

The amount of Entry Fee ... £ 2 : 0 :  
Special ... £ 26 : 2 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 17.4.1918  
When received, 18.4.1918

Geo. Allan  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. APR. 191918.  
Assigned + d. m.c. 4.18

MACHINERY CERTIFICATE WRITTEN

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Bull.

Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.