

REPORT ON MACHINERY.

Hull 30104
No. 8004.

Received at London Office

TUE 8-MAY. 1917

SAT 18-AUG. 1917

Date of writing Report _____ When handed in at Local Office _____ 10 Port of DUNDEE

No. in Survey held at London Date, First Survey 9th Feb 1914 Last Survey 4th May 1914
 Reg. Book. _____ (Number of Visits 19) 10 2-17 Hull

on the S. Trawler "THOMAS ATKINSON"

Master _____ Built at Sully By whom built Wm Cochran & Co (Ld) 806 When built 1914
 Engines made at London By whom made Wm. Cooper & Co (Ld) (No 184) when made 1914
 Boilers made at Hull By whom made C. D. Holmes & Co (Ld) (A 4) when made 1917-8

Registered Horse Power _____ Owners The Amiability Port belonging to _____
 Nom. Horse Power as per Section 28 87.33 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion surface condensing No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 13" - 23" - 34" Length of Stroke 26" Revs. per minute 114 Dia. of Screw shaft 1 1/2" as per rule 1.9 Material of W. Iron
 as fitted 8 1/2" 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 no 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 2'-11 1/2"

Dia. of Tunnel shaft 7.041 as per rule 7.5 Dia. of Crank shaft journals 7.39 as per rule 7 1/2" Dia. of Crank pin 7 1/2" Size of Crank webs 1 1/2" x 4 1/2" Dia. of thrust shaft under
 collars 4 1/2" Dia. of screw 9'-4 1/2" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 33 sq

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
 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 & 3 ejectors Sizes of Pumps 6", 4 1/2" & 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" 2" Connected to condenser, or to circulating pump pump 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 Forward suction How are they protected strong casing and with iron
 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 yes Is it fitted with a watertight door yes worked from _____

BOILERS, &c.—(Letter for record (5) Manufacturers of Steel _____)

Total Heating Surface of Boilers 1440 sq Is Forced Draft fitted no No. and Description of Boilers ISB.
 Working Pressure 200 Lb Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____
 Can each boiler be worked separately _____ Area of fire grate in each boiler 48 sq No. and Description of Safety Valves to
 each boiler _____ Area of each valve _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____
 Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers _____ Length _____ Material of shell plates _____
 Thickness _____ Range of tensile strength _____ Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____
 long. seams _____ Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
 Per centages of strength of longitudinal joint _____ rivets _____ Working pressure of shell by rules _____ Size of manhole in shell _____
 Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
 Length of plain part top _____ Thickness of plates bottom _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
 Material of stays _____ Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____
 Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
 Area at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
 Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
 Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
 Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and
 thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____
 Working pressure by rules _____ 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 _____

IS A DONKEY BOILER FITTED? *no* If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - 2 Top end bolts - nuts, 2 Bottom end bolts - nuts, 2 main bearing bolts - nuts, One set of coupling bolts, One set fuel and size pump valves, One set air pump valves, three condenser tubes and 12 ferrules, Six pint ring studs, one main & one donkey chest valve, two valves for donkey pump, one safety valve spring, one set of fire bars & a quantity of bolts & nuts of various sizes.

The foregoing is a correct description,
FOR COOPER & COY. LIMITED.
W. H. Cooper
DIRECTOR. Manufacturer.

Dates of Survey while building: During progress of work in shops - Feb. 9, 22, Mar. 2, 5, 6, 12, 13, 16, 22, 28, Apr. 3, 6, 14, 18, 19, 24, 26, MAY 1, 4. During erection on board vessel - Apr 25, May 3, Jun 18, Jul 19, 25, 27, 30, 31, Aug 3-10, 7 1/2 visits 10. Total No. of visits 19. Is the approved plan of main boiler forwarded herewith *Andrew King*

Dates of Examination of principal parts - Cylinders 28.3.17 Slides 18.4.17 Covers 18.4.17 Pistons 18.4.17 Rods 24.4.17 Connecting rods 24.4.17 Crank shaft 6.4.17 Thrust shaft 19.4.17 Tunnel shafts ✓ Screw shaft 19.4.17 Propeller 19.4.17 Stern tube 19.4.17 Steam pipes tested 31.7.17 Engine and boiler seatings 25.4.17 Engines holding down bolts 27.7.17 Completion of pumping arrangements 3.8.17 Boilers fixed 2.8.17 Engines tried under steam 3.8.17 Completion of fitting sea connections 25.4.17 Stern tube 25.4.17 Screw shaft and propeller 25.4.17 Main boiler safety valves adjusted 2.8.17 Thickness of adjusting washers 7" 32 A" 32.

Material of Crank shaft *Steel* Identification Mark on Do. 692 J.H.M. Material of Thrust shaft *Steel* Identification Mark on Do. 692 J.H.M. Material of Tunnel shafts ✓ Identification Marks on Do. - Material of Screw shafts *L. Iron* Identification Marks on Do. 692 J.H.M. Material of Steam Pipes *solid drawn copper* ✓ Test pressure 4 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 *no* If so, state name of vessel *Therapy Lass*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines for this vessel have been built under special survey, and in accordance with the terms of the specification. The materials and workmanship are sound and good. The machinery will be eligible in my opinion to have record of L.M.C. (with date) when satisfactorily completed on board, & when the spare part has been checked, the pumping arrangements found in order, and the remaining terms of the specification complied with.*

The machinery has been properly fitted & secured on board the vessel & on completion was tested under steam for two hours under full power & found satisfactory, the steam pipes have been tested, the spare part checked & in my opinion the vessel is eligible for the record + L.M.C. 8.17. Fees: - The fee has not yet been charged, pending the Admiralty's approval of the scale submitted to them. Please see Secretary's letter of 20/4/17 to bundle.

The amount of Entry Fee ... £ : : When applied for, Special ... *done* £ 14: 5 8 } 19. Donkey Boiler Fee ... £ 6: 10 } When received, *Lon.* Travelling Expenses (if any) £ : : } 27/6/17 17. R. G. Committee's Minute *And 12/3* } 31/8/17 Applied for 17.8.17. W.H.R. Assigned *TUE 21 AUG. 1917 + L.M.C. 8.17*

John Mackenzie
Engineer Surveyor to Lloyd's Register of Shipping.

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

MACHINERY CERTIFICATE WRITTEN.

