

REPORT ON MACHINERY

Received at London Office WED. 9 - JAN. 1918

Date of writing Report 4-1-18 When handed in at Local Office 8-1-17 Port of Hull
 No. in Survey held at Hull Date, First Survey 13/8/17 Last Survey 5-1-18 19
 Reg. Book. on the steel screw trawler Fisher Lines (Number of Plates 34) Gross Tons 324
 Master Built at Selby By whom built Cochrane Bros & Co Net Tons 132 When built 1918-1
 Engines made at Hull By whom made Chas. J. Holmes & Co L^{td} (A 6) when made 1918-1
 Boilers made at Hull By whom made Chas. J. Holmes & Co L^{td} (A 20) when made 1918-1
 Registered Horse Power Owners British Admiralty Port belonging to ✓
 Nom. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Cylinders 13" - 23" - 37" Length of Stroke 26" Revs. per minute 118 Dia. of Screw shaft 7.9" Material of screw shaft steel
 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 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 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 ✓
 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 ✓
 No. of Donkey Engines one & 3" extra 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
all suction pipes connected to extra
 No. of Bilge Injections one size 3 1/2" Connected to condenser or to circulating pump condenser Is a separate Donkey Suction fitted in Engine room & size 3" extra
 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 28-9-17 of Stern Tube 28-9-17 Screw shaft and Propeller 28-9-17
 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. Spence & Sons
 Total Heating Surface of Boilers 1440 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 210 lbs Tested by hydraulic pressure to 400 lbs Date of test 13-12-17 No. of Certificate 3257
 Can each boiler be worked separately ✓ Area of fire grate in each boiler 484 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 or woodwork 8" Bl lagged Mean dia. of boilers 165" Length 10'-8" Material of shell plates steel
 Thickness 1 15/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double
 long. seams L.R.B.B. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 5/8" Top 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 15/16" No. and Description of Furnaces in each boiler two plain Material steel Outside diameter 40"
 Length of plain part top 78 1/2" Thickness of plates bottom 7 13/16" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 216 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 2 1/32" Top 3/4" Bottom 3/4"
 Pitch of stays to ditto: Sides 10" x 8" Back 9 3/4" x 8 5/8" Top 11" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202
 Material of stays steel Diameter at smallest part 2.07" Area supported by each stay 88 sq in Working pressure by rules 211 End plates in steam space:
 Material steel Thickness 1 7/32" Pitch of stays 9" x 7 1/2" How are stays secured by nuts Working pressure by rules 210 Material of stays steel
 Diameter at smallest part 7.5" Area supported by each stay 335 Working pressure by rules 233 Material of Front plates at bottom steel
 Thickness 1 1/16" Material of Lower back plate steel Thickness 1 9/16" Greatest pitch of stays 13 3/4" x 9 1/16" 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" Bl 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 ✓ Can the superheater be shut off and the boiler worked
 separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet
 holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
 Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

If met, state whether, and when, one will be sent

IS A DONKEY BOILER FITTED? Yes

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 valve pump valves, one main & one donkey chest valve, two valves for donkey pump, six pump 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,

for CHARLES D. HOLMES & CO. LTD.

Charles D. Holmes

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1917 - Aug 13, Sep 4, 24, 25, 26, 28, Oct 11, 17, 24, 25, 29, 30, Nov 2, 5, 7, 9, 12, 13, 19; During erection on board vessel - 23, 24, 27, 30, Dec 3, 4, 8, 12, 13, 17, 20, 21, 22, 1918 - Jan 1, 5; Total No. of visits 34.

Is the approved plan of main boiler forwarded herewith? Yes already sent.

Dates of Examination of principal parts: Cylinders 5-11-17, Slides 5-11-17, Covers 5-11-17, Pistons 5-11-17, Rods 24-10-17, Connecting rods 29-10-17, Crank shaft 29-10-17, Thrust shaft 5-11-17, Tunnel shafts ✓, Screw shaft 26-9-17, Propeller 26-9-17, Stern tube 24-9-17, Steam pipes tested 19-12-17, Engine and boiler seatings 28-9-17, Engines holding down bolts 3-12-17, Completion of pumping arrangements 22-12-17, Boilers fixed 21-12-17, Engines tried under steam 22-12-17, Main boiler safety valves adjusted 21-12-17, Thickness of adjusting washers 7/8" & 3/8".

Material of Crank shaft Iron Identification Mark on Do. 2057 FLS Material of Thrust shaft Iron Identification Mark on Do. 2054 FLS

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 2018 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 Thusa, class. Iron Steamer

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 was 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 213 lbs.

In my opinion the vessel is eligible for the record + L.M.C. 1-18

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1.18.

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

The amount of Entry Fee ... £ : : When applied for, 28/12/1917
Special 27 : 0
Donkey Boiler 12/3 : :
Travelling Expenses (if any) £ : : 31/12/1917

Committee's Minute FRI. 11 JAN 1918
Assigned + L.M.C. 1.18



Certificate (if required) to be sent to

The Surveys are requested not to write on or below the space for Committee's Minute.

MACHINERY CERTIFICATE
WRITTEN