

REPORT ON MACHINERY

No. 29498

Received at London Office WED. 23 AUG. 1916

Date of writing Report 11-8-16 When handed in at Local Office 14-8-16 Port of Hull
 No. in Survey held at _____ Date, First Survey 19/8/15 Last Survey 10-8-16 19____
 Reg. Book. 425 on the steel screw tugboat "Marconi" (Number of Visits 55) Gross Tons 322
 Master _____ Built at Telby By whom built Cochrane Bros Ltd Net Tons 131
 Engines made at Hull By whom made C. D. Holmes & Co Ltd (1108) when made 1916-8
 Boilers made at Hull By whom made C. D. Holmes & Co Ltd when made 1916-8
 Registered Horse Power _____ Owners F & J. Ross Ltd Port belonging to Hull
 Nom. Horse Power as per Section 28 85 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 13"-23"-37" Length of Strokes 26" Revs. per minute _____ Dia. of Screw shaft as per rule 7.88 Material of Iron
 as fitted 8 1/4" 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 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 1 1/4" 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 #
 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 69.5 SHP
 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 & 3 ejectors Sizes of Pumps 6", 3 1/2" & 6" 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 no 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 wooden 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 30-11-15 of Stern Tube 30-11-15 Screw shaft and Propeller 6-12-15
 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. Colville Bros
 Total Heating Surface of Boilers 1387 # 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 10-7-16 No. of Certificate 3147
 Can each boiler be worked separately _____ Area of fire grate in each boiler 47.8 # No. and Description of Safety Valves to
 each boiler two spring loaded Area of each valve 4.9 # Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 6" lagged Mean dia. of boilers 165" Length 10'-6" Material of shell plates steel
 Thickness 1 15/64" 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. Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 8 1/16" Lap of plates or width of butt straps 17 1/2"
 Per centages of strength of longitudinal joint rivets 87.4 Working pressure of shell by rules 201 Size of manhole in shell 16" x 12"
 plate 84.88
 Size of compensating ring 7" x 1 15/64" No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 40"
 Length of plain part top 77 3/4" Thickness of plates crown 1 13/16" Description of longitudinal joint welded No. of strengthening rings _____
 bottom _____
 Working pressure of furnace by the rules 207 Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 23/32" Top 3/4" Bottom 23/32"
 Pitch of stays to ditto: Sides 10" x 8 1/2" Back 9 3/8" x 8 3/4" Top 11" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 201
 Material of stays steel Diameter at smallest part 2.07" Area supported by each stay 93.5 # Working pressure by rules 200 End plates in steam space:
 Material steel Thickness 1 1/32" Pitch of stays 19 1/2" x 8" How are stays secured D.T. & W. Working pressure by rules 200 Material of stays steel
 Diameter at smallest part 7.5 # Area supported by each stay 351 # Working pressure by rules 222 Material of Front plates at bottom steel
 Thickness 1" Material of Lower back plate steel Thickness 1" Greatest pitch of stays 16 1/2" x 13 1/2" Working pressure of plate by rules 205
 Diameter of tubes 3 1/2" Pitch of tubes 4 7/8" x 5" Material of tube plates steel Thickness: Front 1" Back 7/8" Mean pitch of stays 9 3/4"
 Pitch across wide water spaces 13 3/4" Working pressures by rules 203 lbs Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 11 3/4" x 1 3/4" Length as per rule 37.22 Distance apart 11" Number and pitch of stays in each Three 8 1/2"
 Working pressure by rules 204 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 _____

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, fuel & oil pump valves, one main & one donkey check valve, one fuel pump plunger, two valve spindle bolts & nuts, 6 junk ring studs & nuts, two eccentric rod bolts & nuts, two eccentric strap bolts & nuts, two top & two bottom end bolts for centrifugal pump, one impeller shaft & a quantity of bolts & nuts & nuts of various sizes

The foregoing is a correct description,

CHARLES D. HOLMES & Co. LTD.
Arthur Holmes

DIRECTOR

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1915: - Aug 19, Oct 19, Nov 1, 2, 16, 18, 24, 25, 27, 30, Dec 1, 6, 8, 22, 31 1916: - Jan 20
During erection on board vessel -- Feb 24, 29, Mar 3, 8, 10, 14, 21, 23, Apr 3, 11, 13, 17, 27, May 5, 9, 15, 23, 25, Jun 1, 4
Total No. of visits 55
Is the approved plan of main boiler forwarded herewith? yes

Dates of Examination of principal parts:— Cylinders 15-6-16 Slides 26-6-16 Covers 15-6-16 Pistons 6-6-16 Rods 15-6-16
Connecting rods 15-6-16 Crank shaft 15-6-16 Thrust shaft 15-6-16 Tunnel shafts ✓ Screw shaft 1-12-15 Propeller 1-12-73
Stern tube 27-11-15 Steam pipes tested 26-7-16 Engine and boiler seatings 30-11-15 Engines holding down bolts 13-7-16
Completion of pumping arrangements 10-8-16 Boilers fixed 27-7-16 Engines tried under steam 10-8-16
Main boiler safety valves adjusted 2-8-16 Thickness of adjusting washers P 1/4 S 5/16
Material of Crank shaft Iron Identification Mark on Do. 1594 FLS Material of Thrust shaft Iron Identification Mark on Do. 1595 FLS
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1545 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 no If so, state name of vessel

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 & good. The machinery has been properly fitted & secured on board the vessel & on completion tried under steam & 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 + L.M.C. 8-16

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 8.16.

J.P.R.

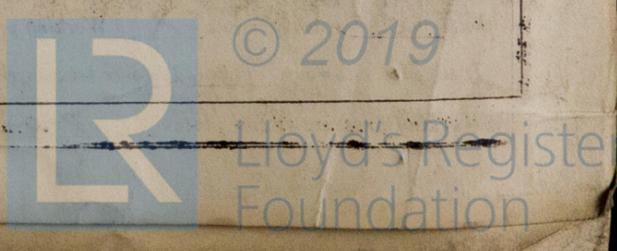
J.W.D.

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 12 : 15 :
Donkey Boiler Fee ... £ ...
Travelling Expenses (if any) £ 8 - 2 :
When applied for, 22/8 1916
When received, 31-8 1916

25/8/16
Frank L. Sturgeon
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute FRI 25 AUG 1916
Assigned + L.M.C. 8.16

MINUTE CERTIFICATE
NOTED



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