

REPORT ON MACHINERY.

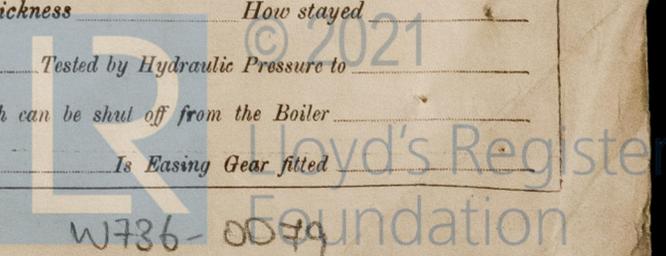
Received at London Office 27 MAY 1917

Date of writing Report 12/4/17 When handed in at Local Office 1/7 1917 Port of Sheffield
 No. in Survey held at Halifax - Yorks. Date, First Survey 5/1/17 Last Survey 5/4/1917
 Reg. Book. on the Admiralty Tender - "Mersey" Class. "Charles Astie" Number of Yards 3 31/5/17 Hull
 Master Selby Built at Selby By whom built Lochane & Co. N. 864 Tons Net When built 1917-45
 Engines made at Halifax By whom made The Campbell & Co. Eng. Co. Ltd. when made 1917-45
 Boilers made at Hull By whom made E. D. Holmes & Co. Ltd. (N. 1137) when made 1917-5
 Registered Horse Power 600 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 13" 23" 37" Length of Stroke 26" Revs. per minute 116 Dia. of Screw shaft 7.9" 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 in length 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 no If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 3' 0"
 Dia. of Tunnel shaft 7.04" Dia. of Crank shaft journals 7.39" Dia. of Crank pin 7.5" Size of Crank webs 11" x 4 1/2" Dia. of thrust shaft under collars 7 1/2" Dia. of screw 9 7/2" Pitch of Screw 11' 0" No. of Blades 4 State whether moveable no Total surface 33 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 5/8" Stroke 4 3/4" Can one be overhauled while the other is at work no
 No. of Bilge pumps 2 Diameter of ditto 2 5/8" Stroke 4 3/4" Can one be overhauled while the other is at work no
 No. of Donkey Engines 2 Sizes of Pumps 6" x 4 1/2" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps one 2" diam in each compartment
 In Engine Room Two 12" diam all suction also connected to 3" yacht
 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" yacht
 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 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
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel
 Total Heating Surface of Boilers 1440 sq ft Is Forced Draft fitted no No. and Description of Boilers one single ended
 Working Pressure 200 lb Tested by hydraulic pressure to Date of test No. of Certificate
 Can each boiler be worked separately no Area of fire grate in each boiler 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 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 Thickness of plates 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



If not, state whether, and when, one will be sent

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 valve pump valves, one main & one donkey check valve, two valves for donkey pump, six pump ring studs & nuts, 3 condenser tubes, one safety valve spring, one set of fire bars & a quantity of bolts & nuts & iron of various sizes*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } *15/1 - 19/1 - 24/1 - 2/2 - 9/2 - 12/2 - 15/2 - 16/2 - 23/2 - 2/3 - 15/3 - 28/3 - 5/4/17*
{ During erection on board vessel --- }
Total No. of visits

Is the approved plan of main boiler forwarded herewith *Forwarded in copy on William Weston*

Dates of Examination of principal parts - Cylinders *26/1 5/4/17* Slides *26/1 6/4/17* Covers *26/1 5/4/17* Pistons *26/1 5/4/17* Rods *26/1 5/4/17*
Connecting rods *26/1 5/4/17* Crank shaft *26/1 5/4/17* Thrust shaft *26/1 5/4/17* Tunnel shafts - Screw shaft *15/1 - 19/1/17* Propeller *15/1 - 19/1/17*
Stern tube *15/1 - 19/1/17* Steam pipes tested *16-5-17* Engine and boiler seatings *23-1-17* Engines holding down bolts *4-5-17*
Completion of pumping arrangements *25-5-17* Boilers fixed *21-5-17* Engines tried under steam *25-5-17*
Completion of fitting sea connections *23-1-17* Stern tube *23-1-17* Screw shaft and propeller *23-1-17*
Main boiler safety valves adjusted *23-5-17* Thickness of adjusting washers *7 1/8 2 3/8*

Material of Crank shaft *Iron* Identification Mark on Do. *673* Material of Thrust shaft *Iron* Identification Mark on Do. *674*

Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts *Iron* Identification Marks on Do. *623 R.F.M.*

Material of Steam Pipes *solid drawn copper* Test pressure *40 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 *"Mersy" Class*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery has been built under special survey and in accordance with the specification and the Society's Rules, materials and workmanship are found and good.*

The engines have been forwarded to Hull for fitting on board the vessel.

The machinery of this vessel has been properly fitted & secured on board the vessel, the steam pipe tested as above, & on completion the machinery 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 210 lbs.

In our opinion the vessel is eligible for the record to L.C. 5-17

It is submitted that this vessel is eligible for THE RECORD. + LMC 5.17.

Certificate (if required) to be sent to

The amount of Entry Fee £ *226-2* Special *2/3* Donkey Boiler Fee *3/6* Travelling Expenses (if any) *8* When applied for, 19... When received, 19...
226.6.7 *29/6/17*

Committee's Minute

Assigned

L.M.C. 5.17

MACHINERY CERTIFICATE WRITTEN

Fees marked at 10/30 - 18/8/17



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Lloyd's Register Foundation

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