

REPORT ON MACHINERY.

Received at London Office

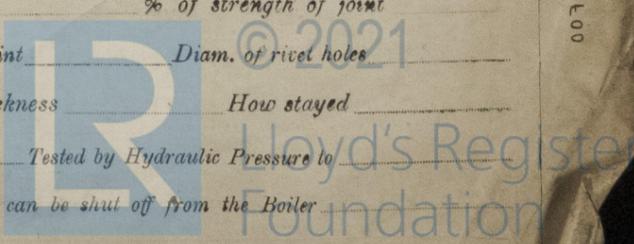
Date of writing Report 19 When handed in at Local Office 14th June 1920 Port of MANCHESTER Date, First Survey 25th April 1918 Last Survey 17th May 1920
 No. in Survey held at BRADFORD (Number of Visits 17 + 16) Reg. Book. on the TRIPLE EXPANSION MARINE ENGINE No. 1718 "CRETEBLOCK" Gross Tons Net Tons
 Master Built at SHOREHAM By whom built JOHN YER MEHR (TUG No. 26) When built 1920.
 Engines made at BRADFORD By whom made NEWTON BEAN & MITCHELL when made 1920-5
 Boilers made at By whom made when made 1920.
 Registered Horse Power Owners Port belonging to London
 Nom. Horse Power as per Section 28 122. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines STEAM TRIPLE EXPANSION INVERTED No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15", 25", 40" Length of Stroke 27" Revs. per minute 120 Dia. of Screw shaft as per rule 8.37" Material of shaft 6" steel
 as fitted 8 7/8" screw shaft
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner (VICKERS PATENT) Is the after end of the liner made water tight
 in the propeller boss 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 3' 3 3/8"
 Dia. of Tunnel shaft as per rule 7.45" Dia. of Crank shaft journals as per rule 7.82" Dia. of Crank pin 7 7/8" Size of Crank webs 5 1/4" x 5" Dia. of thrust shaft under
 as fitted 7.5" as fitted 7 7/8"
 collars 8" Dia. of screw 10' 0" Pitch of Screw 9' 9" No. of Blades 4 State whether moveable No Total surface 34 ft²
 No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 1/2" Stroke 14" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6 x 4 x 6; 5 x 5 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 3 @ 2" In Holds, &c. F. Compt. 1 @ 2"; Main Compt. 1 @ 2";
 Aft Compt. 1 @ 2"
 No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes, 2"
 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
 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
 What pipes are carried through the bunkers None How are they protected
 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 None Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel
 Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
 Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
 Can each boiler be worked separately 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 rivets Working pressure of shell by rules Size of manhole in shell
 plate
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
 bottom
 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 used

410-091E00-051E00



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— One c.i. propeller, one set each of M.P. and L.P. piston rings, one set of shaft coupling bolts, two bolts for connecting rod top end and two for bottom end, two bolts for main bearings, one set of valves each for air, circulating, feed and bilge pumps, one spring of each size as fitted on escape valves, 24 condenser ferrules, assorted bolts and nuts, spanners, eyebolts and gland packing and packing frames.

* Spare propeller supplied, but not placed on board the vessel.

E.H.A.

The foregoing is a correct description,

Hewton, Bean & Mitchell Manufacturers.

Dates of Survey while building: During progress of work in shops: 25/4/19, 24/6/19, 8/7/19, 7/8/19, 11/9/19, 22/10/19, 23/12/19, 25/1/20, 12/2/20, 18/3/20, 28/4/20, 27/5/20, 5/6/20, 22/9/20, 26/1/21, 31/3/21, 17/5/21 = 17 visits. During erection on board vessel: Slid. 1920. June 9, 14, 15, 18, 28. July 2, 7, 15, 16, 17. Aug. 20, 25, 26, 27, 31, Sept. 1, 16. Total No. of visits: Slid. 16, +17.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 7-8-18 Slides 8-7-18 Covers 8-7-18 Pistons 8-7-18 Rods 22-10-18 Connecting rods 18-3-19 Crank shaft 11-12-18 Thrust shaft 1-2-19 Tunnel shafts 3-12-18 Screw shaft 2-3-20 Propeller 2-3-20 Stern tube 2-3-20 Steam pipes tested 17-7-20 Engine and boiler seatings ✓ Engines holding down bolts 28-6-20 Completion of pumping arrangements 13-7-20 Boilers fixed 17-7-20 Engines tried under steam 25-8-20 Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓ Main boiler safety valves adjusted 25-8-20 Thickness of adjusting washers F. boiler - F. 3/8, A 3/8, A boiler - F. 5/16, A 5/16. Material of Crank shaft O.H. STEEL Identification Mark on Do. W.G.H. Material of Thrust shaft FORGED O.H. STEEL Identification Mark on Do. W.G.H. Material of Tunnel shaft FORGED O.H. STEEL Identification Marks on Do. W.G.H. Material of Screw shafts FORGED O.H. STEEL Identification Marks on Do. W.G.H. Material of Steam Pipes Laps welded W.I. Test pressure 540 lbs. No. 1000 P.T.B.

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 REINFORCED CONCRETE TUG.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under special survey and the materials tested in accordance with the requirements of the Society.

The materials and workmanship so far as could be seen are sound and good and the machinery is eligible in my opinion to be classed with record of L.M.C. when installed on board.

* The screw shaft made for Engines No. 1000 by Messrs Grant, Ritchie & Co. Kilmarnock, is fitted in this vessel.

SUNDERLAND: This Machinery has been satisfactorily installed in the vessel and the Survey completed.

The Machinery is eligible in my opinion for the record * L.M.C. 9, 20

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.20 FD

Roll 16/9/20 Ed. W. Putter and A. Campbell Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 30 0 0 Special ... £ 0 0 0 Donkey Boiler Fee ... £ 0 0 0 Travelling Expenses (if any) £ 0 0 0 When applied for, at London, 19... When received, 22-4-1920

Committee's Minute FRI. SEP. 17 1920 Assigned MACHINERY CERT. WRITTEN + L.M.C. 9.20 F.D.

