

REPORT ON MACHINERY.

No. 73810

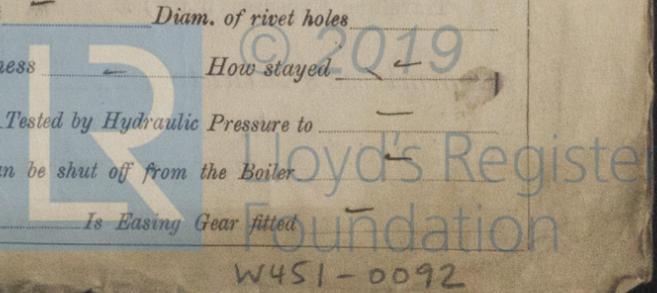
WED NOV. 17 1920

Date of writing Report Nov 10th 1920 When handed in at Local Office Nov 15th 1920 Port of NEWCASTLE-ON-TYNE
 Date, First Survey June 29th Last Survey Nov 12th 1920
 on the Steel screw steamer "Whitemantle" (Number of Visits 27)
 Built at Newcastle By whom built Wood Skinner & Co Lim Tons { Gross 4750 1192
 Net 1040 993
 When built 1920
 Engines made at Scotstoun By whom made Larson & Co Lim (1456) when made 1920
 Boilers made at Malwood-on-Tyne By whom made North Eastern Marine & Co Lim (No 2451) when made 1920
 Registered Horse Power 208 Owners Jas Light and Coke Co Lim Port belonging to London
 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines
 No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 20-33-54 Length of Stroke 36 Revs. per minute 72 Dia. of Screw shaft 11.3 Material of screw shaft Iron
 as fitted 11.4
 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
 the propeller boss Yes 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
 shafts are fitted, is the shaft lapped or protected between the liners — Length of stern bush 4-11
 Dia. of Tunnel shaft 9.93 Dia. of Crank shaft journals 10.45 Dia. of Crank pin 10.74 Size of Crank webs — Dia. of thrust shaft under
 as fitted 10.2 as fitted 10.74
 No. of Blades 4 State whether moveable No Total surface 61.5
 No. of Feed pumps — Diameter of ditto — Stroke — Can one be overhauled while the other is at work —
 No. of Bilge pumps — Diameter of ditto — Stroke — Can one be overhauled while the other is at work —
 No. of Donkey Engines 2 Sizes of Pumps Recd = 5 1/2 x 3 1/2 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps
Ballast = 7 x 11 x 10
 Engine Room Stokehold 4-3 In Holds, &c. 2-3" after hold. 2-3" fore hold.
1-3" forward well. 1-3" hold well.
 No. of Bilge Injections 6 Connected to condenser, on to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 of 3"
 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 the deep water line Yes
 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 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 Yes Is it fitted with a watertight door Yes worked from Upper platform

BOILERS, &c.—(Letter for record 6) Manufacturers of Steel John Spencer
 Total Heating Surface of Boilers 3440 Is Forced Draft fitted No No. and Description of Boilers 2 Single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 2/9/20 No. of Certificate 9455
 Can each boiler be worked separately Yes Area of fire grate in each boiler 49.5 No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 5.94 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 13-9" Length 10-6" Material of shell plates steel
 Thickness 1 3/32 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D. Lap
 cir. seams Double nut Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 18"
 Percentages of strength of longitudinal joint 86.7 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"
 plate 86.4
 No. and Description of Furnaces in each boiler 3 Reigltous Material steel Outside diameter 38 1/2"
 Thickness of plates 1 1/2" Description of longitudinal joint Welded No. of strengthening rings —
 Working pressure of furnace by the rules 196 Combustion chamber plates: Material steel Thickness: Sides 3/32 Back 3/32 Top 3/32 Bottom 13/16
 No. of stays to ditto: Sides 10 1/2 x 9 3/8 Back 10 3/8 x 9 3/8 Top 10 1/2 x 9 3/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs
 Material of stays steel Area at smallest part 2.03 Area supported by each stay 99.9 Working pressure by rules 185 End plates in steam space:
 Material steel Thickness 1 3/8" Pitch of stays 24" x 19 3/4" How are stays secured Double nuts Working pressure by rules 185 Material of stays steel
 Area at smallest part 8.29 Area supported by each stay 474 Working pressure by rules 182 Material of Front plates at bottom steel
 Thickness 1" Material of Lower back plate steel Thickness 1 1/16" Greatest pitch of stays 14 1/2" x 10 3/8" Working pressure of plate by rules 191
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/4" x 4 1/2" Material of tube plates steel Thickness: Front 1" Back 3/4" Mean pitch of stays 9 1/4"
 Distance across wide water spaces 14 1/2" Working pressures by rules 182 lbs Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9 1/4" x 1 1/2" Length as per rule 31" Distance apart 10 1/2" Number and pitch of stays in each 2-9 3/8"
 Working pressure by rules 193 lbs Steam dome: description of joint to shell — % of strength of joint —
 Material — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —
 No. 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 —
 Material 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 & 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, a set of coupling bolts & nuts, a set of feed & bilge pump valves & seats, 1/2 cut each of iron plate, and bars .100 bolts & nuts assorted. one spare propeller, one set of check valves a few cylinder cones, valve chest studs, boiler & condenser tubes, piston bolts & nuts etc.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING Co., LTD.

J. J. Harrison Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1920 Jun 29, July 8, 9, 14, 15, 19, 24, 29, Aug 6, 9, 11, 18, 20, 26, Sep 2, 8, (Nov 5) Sept 23, 26, 30, Oct 6, 14, 18, 24, 30, Nov 5, 12, 24. Total No. of visits 24. Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts: Cylinders, Slides, Covers, Pistons, Rods, Connecting rods, Crank shaft, Thrust shaft 14/4/20, Tunnel shafts 6/8/20, Screw shaft 19/4/20, Propeller 8/10/20, Stern tube 29/4/20, Steam pipes tested 15/10/20, Engine and boiler seatings 20/4/20, Engines holding down bolts 18/10/20, Completion of pumping arrangements 18/10/20, Boilers fixed 18/10/20, Engines tried under steam 30/10/20, Completion of fitting sea connections 18/10/20, Stern tube 18/10/20, Screw shaft and propeller 18/10/20, Main boiler safety valves adjusted 30/10/20, Thickness of adjusting washers Port = 7/16 5/16, Starboard P=3/8 5/16, Material of Crank shaft, Identification Mark on Do., Material of Thrust shaft Sept 8, Identification Mark on Do. 27/4/20, Material of Tunnel shafts Iron, Identification Marks on Do. 27/4/20, Material of Screw shafts iron, Identification Marks on Do. 18/10/20, Material of Steam Pipes Copper, Test pressure 360 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. This engine made by Messrs Larrow & Co has been fitted on board by the H. & M. E. Co. Ltd, who supplied also the condenser & boilers and the rest of the machinery. See Glasgow Report No 40089. The machinery & workmanship are good, and in accordance with the rules requirements & the approved plans, and the vessel is therefore eligible to be classed as regards the machinery with the notation of +L.M.C. 11.20 in the R. P.R.

The engines were seen running under steam on completion, with satisfactory results, and the safety valves were then adjusted to the working pressure.

It is submitted that this vessel is eligible for THE RECORD. +L.M.C. 11.20

Roll 19/11/20

Maurice Petron & Field Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 15 : 4 : When applied for, 16 NOV 1920, Donkey Boiler Fee ... £ : : When received, 15/12/1920, Travelling Expenses (if any) £ : : TUE. NOV. 23 1920

Committee's Minute Assigned +L.M.C. 11.20



NEWCASTLE-ON-TYNE

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

Rpt. 4. Date of writing No. in Sur Reg. Book. on Master Engines made Boilers made Registered in Nom. Horse P ENGINES, Dia. of Cylinder Is the screw in the propeller between the bearings liners are fitted Dia. of Tunnel collars No. of Feed No. of Bilge In Engine Room No. of Bilge Injections Are all the bilge Are all connections Are they fixed Are they each fitted What pipes are Are all Pipes, Are the Bilge Is the Screw BOILERS, & Total Heating Working Press Can each boiler each boiler Smallest distance Thickness long. seams Per centages of str Size of compensating Length of plain Working pressure Pitch of stays to Material of stays Material Area at smallest Thickness Ma Diameter of tubes Pitch across width thickness of girder Working pressure Diameter Pitch of rivets Date of Test Diameter of Safety