

REPORT ON MACHINERY.

No. 12250

Received at London Office

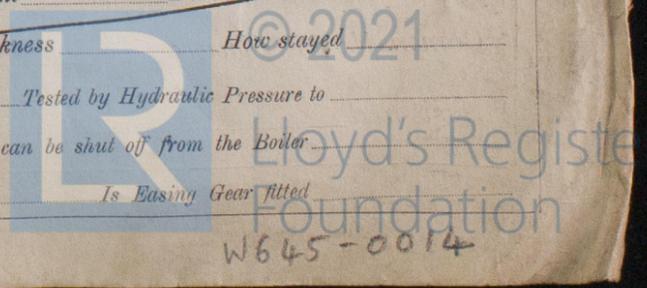
Date of writing Report 21st June 1919 When handed in at Local Office 24th June 1919 Port of Aberdeen
 No. in Survey held at Aberdeen Date, First Survey Oct. 20th 1918 Last Survey 4th June 1919
 Reg. Book. on the Machinery & Boiler for the S.S. "River Dee" (Number of Visits 28)
 Master John Lewis & Sons No. 68 Built at Aberdeen By whom built John Lewis & Sons No. 68 Tons { Gross 573.33
 Engines made at Aberdeen By whom made John Lewis & Sons No. 145 when made 1919 Net 247.53
 Boilers made at Aberdeen By whom made John Lewis & Sons No. 100 when made 1919
 Registered Horse Power 105 Owners John Lewis Limited, Aberdeen Port belonging to Aberdeen
 Nom. Horse Power as per Section 28 105 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines
 Dia. of Cylinders 14" + 24" + 30" Length of Stroke 27" Revs. per minute 88 No. of Cylinders 3 No. of Cranks 3
 Dia. of Screw shaft as per rule 8.1" as fitted 8.25" Material of screw shaft Seap 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
 Is the propeller boss Yes If the liner is in more than one length are the joints burned one length 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 space If two
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 3.025"
 Dia. of Thrust shaft as per rule 7.14" as fitted None Dia. of Crank shaft journals as per rule 7.53" as fitted 7.25" Dia. of Crank pin 7.25" Size of Crank webs 10.25" x 5.5" Dia. of thrust shaft under
 rollers 7.8" Dia. of screw 10.0" Pitch of Screw 14.0" No. of Blades 4 State whether moveable No Total surface 40 sq ft
 No. of Feed pumps 2 Diameter of ditto 2.25" Stroke 13.25" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2.25" Stroke 13.25" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Ballast 6" x 8" x 6" Feed 5.14" x 3.14" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room 2 No. of 2" Boilers from one of 2" In Holds, &c. two of 2"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 2.25"
 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 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
 That pipes are carried through the bunkers Suctions from hold & Ballast Tanks How are they protected Strong wood casings
 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 Yes worked from Yes

BOILERS, &c.—(Letter for record E(S) Manufacturers of Steel David White & Sons Ltd.
 Total Heating Surface of Boilers 1894 Is Forced Draft fitted No No. and Description of Boilers one single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 26.5.19 No. of Certificate 971
 Can each boiler be worked separately Yes Area of fire grate in each boiler 54 sq ft No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 5.94 sq in Pressure to which they are adjusted 184 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork no side bunkers dia. of boilers 13.9" Length 10.6" Material of shell plates S
 Thickness 1.5" Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. Lap
 Long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1.25" Pitch of rivets 8.5" Lap of plates or width of butt straps 17.25"
 Percentages of strength of longitudinal joint
 rivets 88.14 Working pressure of shell by rules 183.8 Size of manhole in shell 16" x 12"
 plate 85.6
 Size of compensating ring No. Nail No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40.375"
 Length of plain part top 6.9" bottom 7.4" Thickness of plates crown 1.5" bottom 1.5" Description of longitudinal joint weld No. of strengthening rings one
 Working pressure of furnace by the rules 198 Combustion chamber plates: Material S Thickness: Sides 2.5" Back 4.16" Top 2.5" Bottom 2.5"
 Pitch of stays to ditto: Sides 9.5" x 9.5" Back 9.5" x 9.5" Top 9.5" x 11.2" If stays are fitted with nuts or riveted heads DN Working pressure by rules 185
 Material of stays S Area at smallest part 2.07 sq in Area supported by each stay 88.36 sq in Working pressure by rules 210.8 End plates in steam space:
 Material S Thickness 1.25" Pitch of stays 19.2" x 18.2" How are stays secured DN + W Working pressure by rules 184.9 Material of stays S
 Area at smallest part 6.33 sq in Area supported by each stay 360.75 sq in Working pressure by rules 182.5 Material of Front plates at bottom S
 Thickness 1.375" Material of Lower back plate S Thickness 1.25" Greatest pitch of stays 14.75" Working pressure of plate by rules 206
 Diameter of tubes 3.5" Pitch of tubes 4.25" x 4.25" Material of tube plates S Thickness: Front 1.375" Back 4.16" Mean pitch of stays 8.87"
 Pitch across wide water spaces 14.25" Working pressures by rules 182 Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 10" x 5" dble Length as per rule 29.5" Distance apart 11.25" Number and pitch of stays in each two 9.5"
 Working pressure by rules 191.8 Steam dome: description of joint to shell none % of strength of joint

Diameter 1.25" Thickness of shell plates 1.25" Material S Description of longitudinal joint weld Diam. of rivet holes 1.25"
 Pitch of rivets 8.5" Working pressure of shell by rules 183.8 Crown plates None Thickness 1.25" How stayed None
SUPERHEATER. Type None Date of Approval of Plan None Tested by Hydraulic Pressure to None
 Date of Test None Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler None
 Diameter of Safety Valve None Pressure to which each is adjusted None Is Easing Gear fitted None



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied :-

Two top and 2 bottom end bolts + nuts, 2 main bearings and one pet coupling bolts + nuts. One pet each, Air circulating feed bridge pump valves, One each, main and donkey check valve, One safety valve spring, Bolts + nuts assorted and iron of various sizes.

The foregoing is a correct description,

JOHN LEWIS & SONS, LTD.

Jas I Donald See Manufacturers

Dates of Survey while building: During progress of work in shops - 1918 Oct. 29 Dec. 9 1919 Jan. 13 Feb. 5-18-24-27-28 Mar. 12-14-20-24-27-28-31 April 1-4-8-11-15-16-22; During erection on board vessel - May 1-13-26-27 June 1-4; Total No. of visits 28

Is the approved plan of main boiler forwarded herewith?

Is the approved plan of main boiler forwarded herewith?

Dates of Examination of principal parts - Cylinders 8-1-19 Slides 15-1-19 Covers 24-2-19 Pistons 24-2-19 Rods 12-1-19 Connecting rods 12-1-19 Crank shaft 4-4-19 Thrust shaft 28-3-19 Tunnel shafts none Screw shaft 11-4-19 Propeller 8-4-19 Stern tube 8-4-19 Steam pipes tested 2-6-19 Engine and boiler seatings 16-4-19 Engines holding down bolts 13-5-19 Completion of pumping arrangements 4-6-19 Boilers fixed 13-5-19 Engines tried under steam 4-6-19 Completion of fitting sea connections 15-4-19 Stern tube 15-4-19 Screw shaft and propeller 15-4-19 Main boiler safety valves adjusted 4-6-19 Thickness of adjusting washers Port 2 3/8 Stank 3/8; Material of Crank shaft S Identification Mark on Do. N: 921 (Dun) Material of Thrust shaft S Identification Mark on Do. 28-3-19.RAB; Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts S Identification Marks on Do. 28-3-19.RAB; Material of Steam Pipes Copper, 3 3/4" Bore, N: 6 B.W.L. Test pressure 360 lbs

Is an installation fitted for burning oil fuel?

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? If so, state name of vessel "Hachin"

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

These engines and boiler have been constructed under special survey in accordance with the Secretary's letter, the Rules and approved plan. The materials and workmanship are good. They have now been fitted in the vessel and tried under steam with satisfactory results and are eligible in my opinion to have the notation of LMC 6-19 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 6. 19.

W.D. ARK 26/6/19

W. Wilson Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 : When applied for, Special ... £ 15 : 15 : 24-6-19.19.19; Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ 5.9. 19.19.19

FRI. 27. JUN. 1919

Committee's Minute

Assigned

+ LMC 6. 19.

MARINE ENGINEER



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