

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 Built at Aberdeen By whom built John Lewis & Sons No. 68
 Engines made at Aberdeen By whom made John Lewis & Sons No. 145 when made 1919
 Boilers made at Aberdeen By whom made John Lewis & Sons No. 100 when made 1919
 Registered Horse Power 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 Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 14" + 24" + 39" Length of Stroke 27" Revs. per minute 88 Dia. of Screw shaft as per rule 8.1" Material of screw shaft Scrap 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'-0 3/4"
 Dia. of Tunnel shaft as per rule 7.14" Dia. of Crank shaft journals as per rule 7.53" Dia. of Crank pin 7 3/4" Size of Crank webs 10 1/2" + 5 3/8" Dia. of thrust shaft under
 rollers 7 3/8" Dia. of screw 10'-0" Pitch of Screw 14'-0" No. of Blades 4 State whether moveable No Total surface 40 ft²
 No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Ballast feed 5' 1/4" x 3' 1/2" x 5' No. and size of Suctions connected to both Bilge and Donkey pumps
 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 1/2"
 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 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 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 No Is it fitted with a watertight door Yes worked from

BOILERS, &c.—(Letter for record E(S) Manufacturers of Steel David Beville & 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 ft² No. and Description of Safety Valves to
 each boiler 2 spring loaded Area of each valve 5'-9 1/4" 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 3/8" 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 3/16 Pitch of rivets 8 1/4" Lap of plates or width of butt straps 17 3/8
 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"
 Size of compensating ring 10" No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40 3/4"
 Length of plain part top 6'-9" Thickness of plates crown 1 1/8" Description of longitudinal joint Weld No. of strengthening rings one
 bottom 7'-4" Thickness of plates bottom 3/8"
 Working pressure of furnace by the rules 198 Combustion chamber plates: Material S Thickness: Sides 25 3/32 Back 4 1/6 Top 25 3/32 Bottom 25 3/32
 Pitch of stays to ditto: Sides 9 1/4" x 9 1/4" Back 9 1/4" x 9 1/4" Top 9 1/4" x 11 1/2" 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 ft² Area supported by each stay 88.36 ft² Working pressure by rules 210.8 End plates in steam space:
 Material S Thickness 1 3/16 Pitch of stays 19 1/2" + 18 1/2" How are stays secured DN + W Working pressure by rules 184.9 Material of stays S
 Area at smallest part 6.33 ft² Area supported by each stay 360.75 ft² Working pressure by rules 182.5 Material of Front plates at bottom S
 Thickness 1 3/16 Material of Lower back plate S Thickness 1 3/16 Greatest pitch of stays 14 1/4" Working pressure of plate by rules 206
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" + 4 3/8" Material of tube plates S Thickness: Front 1 3/16 Back 4 1/6 Mean pitch of stays 8.87"
 Pitch across wide water spaces 14 1/2" 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 1/8" Distance apart 11 1/2" Number and pitch of stays in each Two 9 1/4"
 Working pressure by rules 191.8 Steam dome: description of joint to shell none % 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

W645-0014

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 bearing 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 Secy 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 yes

" " " donkey " " "

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 3/4 Stern 3 3/4
Material of Crank shaft S Identification Mark on Do. N° 921 (Pump) 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.G. 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 yes

Is this machinery duplicate of a previous case yes 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.

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 15 : 15 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 24-6-19
When received, 5-7-19

Committee's Minute

Assigned

FRI. 27 JUN. 1919

+ LMC 6. 19.

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



© 2021

Lloyd's Register
Foundation